

A CHILD'S HISTORY OF ART

By V. M. HILLYER AND E. G. HUEY



A CHILD'S HISTORY OF ART

By V. M. HILLYER

A CHILD'S GEOGRAPHY OF THE
WORLD

A CHILD'S HISTORY OF THE
WORLD

CHILD TRAINING

THE DARK SECRET

With EDWARD G. HUEY

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BY

V. M. HILLYER
and E. G. HUEY



Illustrated with Photographs

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TO

MRS. V. M. HILLYER

TO GROWN-UPS

A Child's History of Art was begun by Mr. Hillyer but was unfinished at the time of his death. With the valuable assistance of Miss Helen Knight, Vice Principal of the Calvert School, the book has been completed as nearly as possible in Mr. Hillyer's own style.

As with Mr. Hillyer's other books, the various chapters have been "tried out" in the classes of the Calvert School before their final publication in book form. Each of the three sections of the book represents a year's course in art history, the painting section being used in the fourth grade, the sculpture in the fifth grade, and the architecture in the sixth grade. By using more than one chapter a week, however, classes could complete the book in a much shorter time.

In a book of this kind it is, of course, impossible to include every important name in the history of art. We can only hope that if you have a favorite artist, he has not been omitted and that the child's interest in these names may lead to further study of others.

A LIST OF THE STORIES IN THIS BOOK

*Mothers, fathers, teachers and printers of books
call this list The Table of Contents*

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PART I
PAINTING

CHAPTER 1

THE OLDEST PICTURES IN THE WORLD

I WAS listening to the teacher, but I had my pencil in my hand. There were two little dots about an inch apart on my desk lid. Absent-mindedly I twisted my pencil point into one dot and then into the other. The two dots became two little eyes. I drew a circle around each eye, then I joined the two circles with a half-circle that made a pair of spectacles.

The next day I made a nose and a mouth to go with the eye and spectacles.

The next day I finished the face and added ears and some hair.

The next day I added a hat.

The next day I added a body, with arms, legs, and feet.

The next day I went over the drawing again, bearing heavily on my pencil. Over and over again I followed the lines till they became deep grooves in my desk lid.

The next day my teacher caught me and I caught *it!*

The next day my father got a bill for a new desk and I got— Well, never mind what I got.

“Perhaps he’s going to be an artist,” said my mother.

“Heaven forbid!” said my father. “That would cost me much more than a new desk.” And heaven did forbid.

I know of a school that has a large wooden tablet in the hall for its pupils to draw upon. At the top of the tablet is printed:

IF YOU JUST MUST DRAW, DON’T DRAW ON YOUR DESK,
DRAW ON THIS TABLET.

If you put a pencil in any one's hand, he just must draw something. Whether he is listening to a lesson or telephoning, he draws circles and faces or triangles and squares over the pad—if there is a pad. Otherwise he draws on the desk top or the wall, for he just must draw something. Have you ever seen any telephone pad that was not scribbled upon? We say that's human nature. It shows you are a human being.

Now, animals can learn to do a good many things that human beings can do, but one thing an animal can't learn is to draw. Dogs can learn to walk on two legs and fetch the newspaper. Bears can learn to dance. Horses can learn to count. Monkeys can learn to drink out of a cup. Parrots can learn to speak. But human beings are the only animals that can learn to draw.

Every boy and girl who has ever lived has drawn something at some time. Haven't you? You have drawn, perhaps, a horse or a house, a ship or an automobile, a dog or a cat. The dog may have looked just like a cat or a cat-erpillar, but even this is more than any animal can do.

Even wild men who lived so long ago that there were no houses, only caves, to live in—men who were almost like wild animals, with long hair all over their bodies—could draw. There were no paper or pencils then. Men drew pictures on the walls of their caves. The pictures were not framed and hung on the walls. They were drawn right on the walls of the cave and on the ceiling too.

Sometimes the pictures were just scratched or cut into the wall and sometimes they were painted in afterward. The paints those men used were made of a colored clay mixed with grease, usually simply red or yellow. Or perhaps the paint was just blood, which was red at first and then turned almost black. Some of the pictures look as if they had been made with the end of a burned stick as you might make a black mark with the end of a burned match. Other pictures were cut into bone—on the horns of deer or on ivory tusks.

Now, what do you suppose these cave men drew pictures of? Suppose I asked you to draw a picture of anything—just anything. Try

it. What you have drawn is probably one of five things. A cat is my first guess, a sail-boat or an automobile is my second, a house is my third guess, a tree or a flower is my fourth, and a person is my fifth. Are there any other kinds?

Well, the cave men drew pictures of only one kind of thing. Not men or women or trees or flowers or scenery. They drew chiefly pictures of animals. And what kind of animals, do you suppose? Dogs? No, not dogs. Horses? No, not horses. Lions? No, not lions. They were usually big animals and strange animals. But they were pretty well drawn, so that we know what the animals looked like. Here is a picture a cave man drew thousands of years ago.



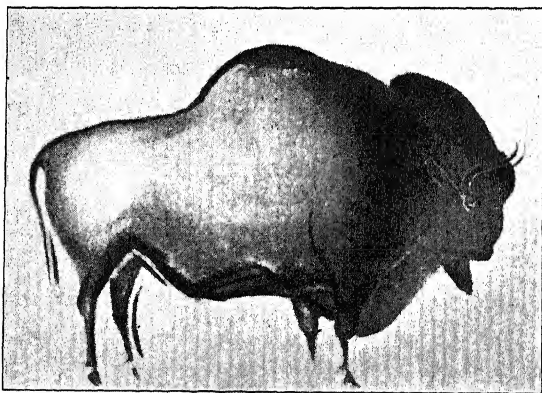
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CHARGING MAMMOTH

You know it's a picture of some animal, and it's not a cat or a caterpillar. It is some animal of the kind they had in those days. It looks like an elephant and it *was* a kind of elephant—a huge elephant. But its ears were not big like our elephants' ears and it had long hair. Elephants now have skin or hide, but hardly any hair. This animal we call a mammoth. It had long hair because the country was cold in those days and the hair kept the animal warm. And it was much, *much* bigger even than our elephants.

There are no mammoths alive now, but men have found their bones and they have put these bones together to form huge skeletons. We still call any very big thing "mammoth." You've probably heard of Mammoth Cave in Kentucky. It was called Mammoth, not because mammoths lived in it, because they didn't, but just because it is such a huge cave.

The cave men drew other animals besides the mammoth. One was the bison, a kind of buffalo. You can see a picture of a buffalo on our five-cent piece. It looks something like a bull. A little girl had gone



Courtesy of The University Prints

STANDING BISON

to a cave in Spain with her father, who was searching for arrow-heads. While he was looking on the ground, she was looking at the ceiling of the cave and she saw what she thought was a herd of bulls painted there. She called out, "See the bulls!" and her father, thinking she had seen real bulls, cried: "Where? Where?"

Other animals they drew were like those we have now—reindeer, deer with big antlers, and bears and wolves.

It was quite dark in the caves where the cave men drew these pictures, for of course there were no windows, and the only light was

a smoky flame from a kind of lamp. Why, then, did they make pictures at all? Such pictures couldn't have been just for wall decorations, like those you have on your walls, because it was so dark in the cave. We think the pictures were made just for good luck, as some people put a horseshoe over the door for good luck. Or perhaps they were to tell a story or make a record of some animal the cave man had killed. But perhaps the cave man just had to draw something, as boys and girls nowadays draw pictures on the walls of a shed or even sometimes on the walls of their own houses or, worse yet, on their desk tops.

The pictures made by these wild men—bearded and hairy cave men—are the oldest pictures in the world, and the artists who made them have been dead thousands of years. Can you think of anything you might ever make that would last as long as that?

CHAPTER 2

WHAT'S WRONG WITH THIS PICTURE?

THE cave men made pictures on the walls and ceilings of their caves. The old Egyptians didn't live in caves. They lived in houses, where they didn't draw pictures on the walls or ceilings. Their houses were usually mud huts, not much better than the caves that the cave men lived in, but the Egyptians were not interested in the houses they lived in. They were interested only in the houses they were dead in (tombs, we call them) or in the houses they made for their gods (temples, we call them).

Most dead people are buried in the ground nowadays, but the Egyptians thought the ground was no place for the dead. Besides, much of the ground of Egypt was under water for almost half of each year, for the River Nile flooded the country regularly every summer, and that would have been bad for graves.

The Egyptians believed their bodies would come to life again after thousands of years, and so kings and rich people, who could afford it, built tombs to be buried in. And they built them to last—never out of wood or anything like that, but of solid stone or brick. They wanted to put their bodies in a safe place, something like a safe-deposit vault. When they died, their bodies were preserved in a way we call embalming, so as not to decay.

These embalmed bodies were called mummies and the mummies were put in coffins that were shaped something like the bodies. On the coffins, or mummy cases, and on the plaster walls of their tombs and temples, the Egyptians drew and painted pictures—thousands of



Courtesy of The University Prints

EGYPTIANS BRINGING PRESENTS TO THE KING

them, to cover every bit of space. And these pictures were made while the people were still alive.

These pictures that the Egyptians made on the mummy cases and on the walls of tombs and temples were not pictures of wild animals such as the cave men made. Some were of animals, though not the kind of animals the cave men drew. Most of the pictures were of people—men and women, kings and queens, gods and goddesses.

There is a way of finding out how old boys and girls are, without

asking their age. We show them drawings of three faces from each of which something has been left out. The first face has no eyes, the second face has no mouth, the third face has no nose. Then we ask who can tell what is left out. Now, you might think any one could tell what was wrong with these pictures, but until boys and girls are about *six years old*, they can't see that anything at all is left out, so if they can't see what is wrong, we know they are not six years old.



LANCE MAKER

Here is an Egyptian picture that has something wrong with it. It's the picture of a seated man making a lance—a lance maker. I wonder if you are old enough to see what's wrong with this picture.

See if you can find out what's wrong, before I tell you. If you

can't see what's wrong, you may be even sixty years old, for some quite old people can't see what it is. It's a sort of puzzle. See if you've guessed right.

It's this: the eye is the shape an eye has when we see it from the front, but the face is a side face. So it is a front eye in a side face.

Another peculiar thing about this picture is that the body is twisted. The shoulders are full front, but the hips, legs, and foot are sideways.

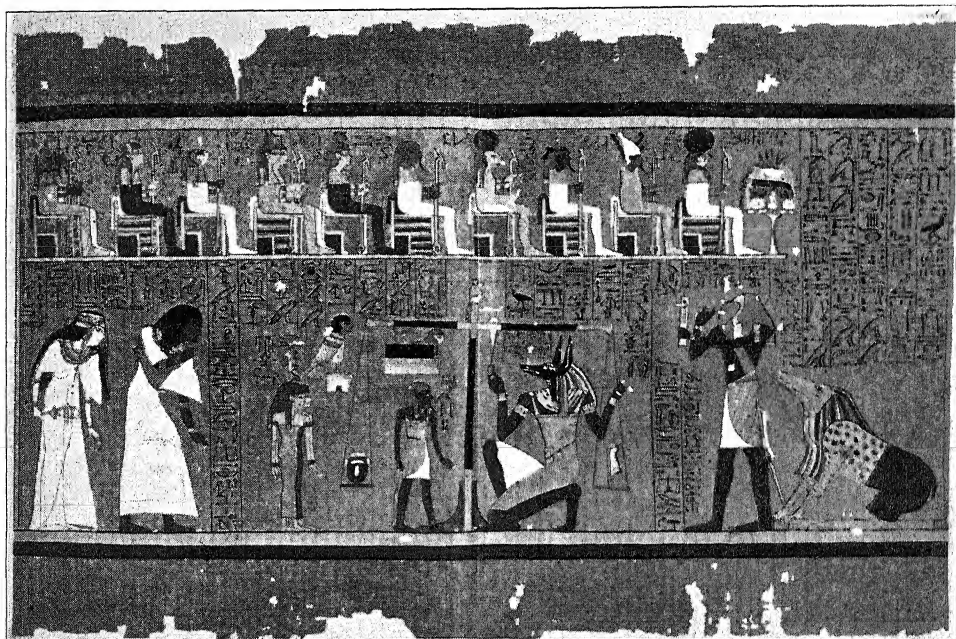
In old Egyptian times all the artists drew certain things in a certain way. The artists were taught to draw that way, and they had to draw that way such things as I have mentioned—the front eye in the side face, the front shoulders with a side view of legs and feet.

Have you ever noticed the pictures on magazine covers? Some are just pictures of pretty women or pretty flowers. But some of the pictures *tell a story* or part of a story. Some of these story-telling pictures have words underneath to tell what the picture means, but some don't need any words underneath. The picture tells the story without any words. We call such pictures that tell a story illustrations.

Egyptian pictures are chiefly illustrations. They tell a story either with or without words—a story of the life of some dead king or queen, their battles, their hunting parties, their parades. And above, below, or at the side, there are often words, in Egyptian writing, that describe the pictures. These words look very much like pictures, themselves, for the Egyptian writing is a kind of picture writing. It is called hieroglyphics.

When Egyptian artists drew a king with common people around him, they made the king very large and the other people very small. The king was made to be a giant—two or three times as large as the common people—just to show he was really a *great* man.

When the Egyptian artists drew pictures of crowds, they didn't know how to show men farther back in the picture, as we should do, by drawing them smaller and raising them a little bit. They made those farther back the same size as those in front, and to show that they



Courtesy of The University Prints

AN EGYPTIAN PICTURE WITH HIEROGLYPHICS

were farther back they put those in the back *above* those in front.

We have hundreds of colors and shades nowadays, but the Egyptians had only four bright colors—red, yellow, green, blue. Besides these they had black, white, and brown. And their colors lasted. You know how hard it is to find any color nowadays that doesn't fade. Window curtains, couch covers, even the colors of dresses, fade unless they are sunfast. But these pictures the Egyptians made are almost as fresh and bright as when first done, thousands of years ago. That's because the colors used were "fast," and also because the pictures were hidden away in the dark where the sun could not fade them. They were drawn and painted on the plaster walls and the colors were very bright—not like nature. It didn't matter whether something really

had any color, or what the particular color should be. They painted it the way they thought looked well. They might paint a man's face bright red or even green!

When you think of all these old pictures that were not meant to be seen by the eye of any man, you may wonder: Why did the Egyptians make them? What was the idea? And yet to-day when we build a great building such as a church, a house of God, a Christian temple, we put into a hollow stone in the foundation—a corner-stone, we call it—the daily paper, photographs of people alive at the time, and so on. Why? The building is expected to last for ages and the corner-stone will never be opened until the building comes down. Why? Our idea may be something like the old Egyptians' idea, after all!

CHAPTER 3

PALACE PICTURE PUZZLES

AN INCH away from Egypt on my map, but a thousand miles away on the ground, was another old country called—well, there were several countries there with hard names. Egypt was a One River Country. These other countries, a thousand miles off to the east, had Two Rivers, so let's bunch them together and call them, for short, the Two River Country. If you want to know the real names of these countries, they were Mesopotamia, Chaldea, Babylonia, and Assyria.

This part of the world is where the Garden of Eden was supposed to be. The One River Country and the Two River Country are the two oldest countries in the world. We don't know which is older.

Here in this Two River Country, once, were the largest and most important cities of the ancient world—cities bigger, perhaps, than New York or London—and here ruled mighty but cruel kings. Yet there isn't a building of these old cities left. The reason for this is that the buildings weren't built of stone as the buildings of Egypt were, for there was very little stone in the Two River Country. They were built of bricks made of mud, of which there was plenty, but the bricks were only dried in the sun, not baked by fire as the Egyptian bricks were. You know how mud pies dried in the sun soon crumble to pieces. Well, these buildings made of sun-dried bricks have all crumbled away and where once were magnificent cities, there are now only mounds of brick dust which look like natural hills.

You may wonder why the people of these countries didn't bake

their bricks in fire, for fire-baked bricks last longer than almost anything else. The reason is that they didn't have much wood or much other fuel to make fire with. On some bricks, however, they painted pictures and decorations and these they covered with a glass-like substance (glaze, we call it), then baked them in the fire so that they became colored tiles. These tiles have lasted and have been found by men digging down in the mounds which once were cities of brick buildings.

In Egypt, as I told you, the artists painted pictures chiefly for the dead to see. In the Two River Country artists didn't care about the dead people. They painted pictures for live people to see.

The kings didn't build tombs. They weren't interested in what was to become of them after they were dead. Instead, they built great palaces for themselves and great temples for their gods. These palaces and temples were built of brick, but a mud palace or temple was not very beautiful, so the artists covered the walls with pictures made on slabs of alabaster and with tiles.

Alabaster is a stone, usually white, so soft that it can be cut easily. So the artists cut pictures on slabs of alabaster and painted them in much the same way as the Egyptians painted their pictures.

Each tile had on it a different part of a picture, and then a great many tiles were put together to form a large picture, as picture puzzles are put together from separate pieces. There is a kind of picture, which you may not have seen, that is made of many tiny pieces of different colored stones. A picture made of colored stones is called a mosaic, and these people who lived in the Two River Country were the first to use a kind of mosaic work.

The Egyptian pictures on the inside walls of the tombs or temples are still there, but those on the mummy cases have been put in museums. The alabaster and tile pictures of the Two River people were dug up from under the mounds that once were buildings and they too have been put in museums.

These alabaster and tile pictures made in the Two River Country told stories about the king and his courtiers doing something. The two chief things the king and his courtiers liked to do, and did, was to hunt wild animals and to fight battles, so there were many pictures of battles and hunting parties.

The pictures found in the Two River Country are like the Egyptian pictures in some ways. As in Egypt, the eye is a front eye in a side face, but the shoulders are drawn side view. When an artist wished to show men back of those in front, he drew the figures *above* those in front as the Egyptian artists did. But in some of their pictures the Two River artists did try to show the men behind by raising them only a little in the picture and making them smaller, and by partly covering those behind with those in front. This effect, showing distance in a picture, is called perspective.

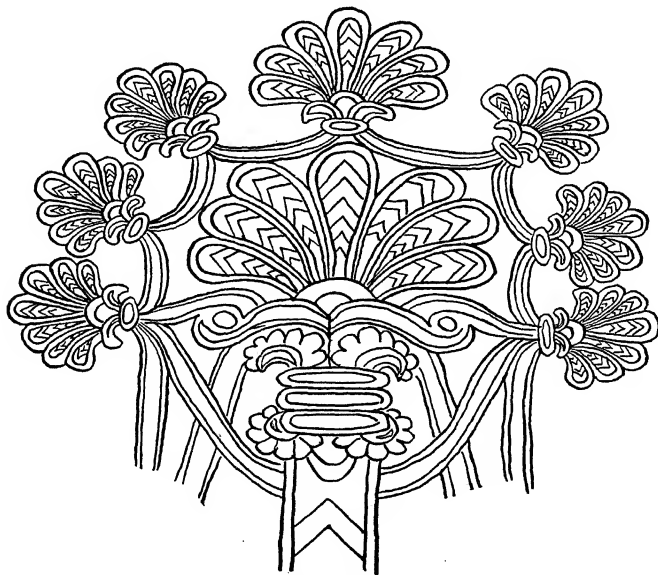
But the kind of men the Two River artists drew were different from those the Egyptians drew. The Two River artists admired strength and strong men, and they thought all strong men had long hair and beards. So they made the pictures of kings very muscular, with bulging muscles in their arms and legs, and with long hair and long beards every lock of which was carefully curled. The curls were regular corkscrew curls, as if freshly done with a curling iron!

The pictures of animals these people made are much more natural than those the Egyptians drew. The ones they liked best to paint were the lion and the bull, because these animals are so strong.

The Two River people were especially good at making designs and decorations for borders. One was called the rosette. It is a dot with a little wheel-like arrangement around it and we are still using it. Another design they made was called the guilloche—which we pronounce gee-lōsh. We use some of the same designs to-day in tiles for bathroom floors and for the halls of public buildings.

One picture the Two River people made has been copied by the artists of many other countries. This was the picture of a peculiar tree

called the Tree of Life. It is a tree like no tree that grows. It has many different kinds of leaves and flowers and fruits all on the same tree at the same time. It is often used in designs on rugs and in embroidery. We don't know what it meant or why it was called the Tree of Life, so you'll just have to guess why.



THE TREE OF LIFE

CHAPTER 4

APRIL FOOL PICTURES

I ONCE had a cat whom I used to tease by holding her up to a mirror. When she saw what she thought was another cat, she would arch her back and spit. I thought it very funny. But this is a strange thing—if you showed her the *picture* of a cat, she didn't seem to see it at all. Dogs are the same. They will growl when they see themselves in a mirror, but if you show them a picture of another dog or even a cat, they will pay no attention to it at all. Animals, though they have eyes to see, do not see pictures.

Some people are like that. They may *look* at pictures but not *see* them. So there is a difference between looking and seeing. That's what the Bible means when it says there are those that "have eyes, and see not."

When I was a boy, there used to be a candy shop on the corner. On the counter was painted a silver dollar. It was painted so naturally that every one tried to pick it up. I thought it wonderful and that the artist who had done it must be a wonderful artist, too.

I remember also being taken to an art gallery where there was one picture that I liked best. To me it was a marvel. It was the picture of a door half open, with a lady peeking out from behind it. When you first looked at it, you were startled. The picture was so lifelike you could hardly believe it was not a real person looking out from behind a real door. I thought that must be the greatest kind of art—to paint something so natural and lifelike that a person would be fooled into thinking it real.

Well, the old Greek painters seemed to feel the same way about pictures. Greece, as you know, is across the Mediterranean Sea from Egypt. You may not know, however, that the Greeks were the greatest sculptors that have ever lived and were also great architects. But their pictures were not so great, for many of them were of this kind of April Fool painting that I've described. They tried to paint pictures that would fool people into believing they were real.

In Egypt and Assyria we know the paintings but not the names of the painters who did them. In Greece we know the names of the painters but not the paintings they did. Here is the name of the first painter whose name we do know. He was a Greek. It is a hard name, not easy like Smith or Jones, for most Greek names sound strange to us. But as he is called the father of Greek painting, you might want to remember his name. It was Polygnotus. The writers of the time of Polygnotus tell us that he was a wonderful painter, but not one of his pictures is in existence, so we have to take their word for it.

As a matter of fact, we have very few Greek paintings, and one reason that we have so few is that most of the pictures were painted on something that could be moved from place to place, like the pictures we hang on our own walls, and these movable pictures have all been lost or destroyed.

One of the most famous April Fool painters was a Greek artist named Zeuxis, who lived four hundred years before Christ was born. It is said that he painted a boy carrying a bunch of grapes and the grapes looked so real that the birds came and pecked at them, trying to eat them. He entered his picture in a contest, or match, with a rival painter named Parrhasius. It was to be decided which was the greater artist. Every one was sure that Zeuxis must get the prize because the birds were fooled into thinking the grapes he had painted were real. Parrhasius's picture had a curtain drawn across the front of it.

"Now," said Zeuxis to Parrhasius, "draw back the curtain and show us your picture."

To which Parrhasius replied: "The curtain *is* my picture. Even you, a human being, were fooled into thinking it was real. So I win. You fooled the birds, but I fooled you. And besides, the boy you painted holding the grapes wasn't so lifelike or he would have scared the birds away."

But the best and worst Greek painting was on the floor of a famous hall. It was painted with fruit skins, peelings, rinds, and pieces of food as if they had fallen from the table and hadn't been swept up. It was called the "Unswept Hall" and the Greeks thought it wonderful. But how could they have thought it beautiful or worthy of an artist, no matter how naturally and realistically it was painted?

The greatest of all the Greek painters was named Apelles. He was a great friend of that precocious young ruler and general, Alexander the Great, and painted Alexander's portrait. And yet we know him more by two of his sayings that have become famous than by his pictures.

A shoemaker once criticized the way Apelles had painted a sandal in one of his pictures. Apelles was glad to have expert advice from one who knew sandals and he made the correction. The next day the shoemaker criticized another part of the same picture. But this time Apelles did not like the criticism, for he felt the shoemaker didn't know what he was talking about, so he exclaimed, "Let the shoemaker stick to his last," which meant, let him stick to his own business, to things he knows about. A last is the form on which shoes are made. Let him, therefore, criticize only the things he knows about.

Apelles was a very hard worker and made it a rule never to let a day go by without doing some worth-while work. So he used to say, "No day without a line." Though it is more than two thousand years since he lived, we still quote these sayings. They have become proverbs. They have lasted, but none of his paintings have, though every one who lived at his time honored him and called him the greatest painter of Greece.

We are told another story to show how skilled Apelles was in handling a brush. It is said that one day he visited a friend of his, also an artist. The friend was not at home, so Apelles picked up a brush and, dipping it in paint, drew an extremely fine, thin line across a board on the artist's easel, to see if his friend would know who'd been there. His friend returned and when he saw the painted stroke on his easel, he exclaimed:

"Apelles has been here. No one else in the world could make such a fine and beautiful brush stroke as this—except myself."

Then he painted another line, down the length of the fine one Apelles had made, splitting it in two. Later Apelles returned. When he saw a still finer stroke down the middle of his own line, he picked up the brush once more and with another stroke did what seemed impossible. Again he divided the fine line lengthwise. "Splitting hairs," we should call it.

I can show you no pictures with this chapter, because there are no pictures to show. What a pity there are none of these pictures left, so that we might judge for ourselves and see if they really were so wonderful!

CHAPTER 5

JARS AND JUGS

BUT one kind of Greek painting has lasted, examples of which are in many museums. These are the paintings that were made on vases.

Our vases are made out of glass, china, or copper, and are usually for one purpose—to hold flowers. We don't usually paint or even decorate the outside. But Greek vases were all made out of clay and they were not used for flowers at all. They were used to hold anything liquid—water, wine, oil, ointments, perfumes—as we would use jars and jugs, bottles and bowls, cups and kettles, pitchers or tin cans. They were made in many beautiful shapes. Some were tall and thin, some were short and fat. Some had one handle like a cup, some had two handles. Our pitchers and kettles and bowls to-day, whether they are made of glass or silver or china, are copies of many of the Greek vase forms. The Greeks had names for most of the shapes, and though the names are hard, you might like to learn some of them so that you may surprise your friends by calling the vases, bowls, pitchers, or dishes in your own house by their Greek names.

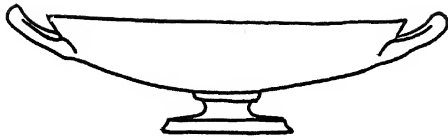
The *kylix* was a flat vase, shaped something like a fruit dish.

The *askos* was a low vase with a spout and a handle across the top. It was used for oil with which to fill lamps. It was, in other words, an oil can—only it was not made of tin.

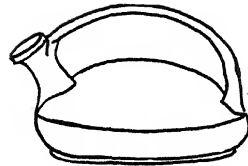
The *amphora* was a rather fat vase with two handles on the hips.

The *oinochoë* was a pitcher-shaped vase.

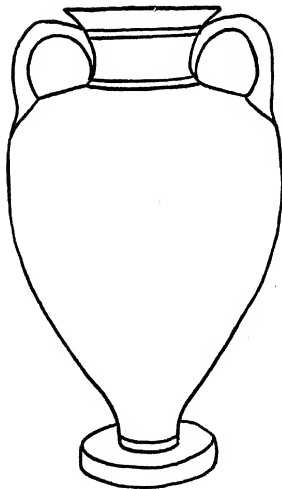
The *lekythos* was a tall, thin, bottle-shaped vase with one handle.



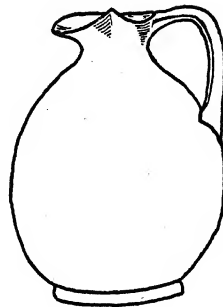
KYLIX



ASKOS



AMPHORA



OINOCHOË



LEKYTHOS

All the better vases were painted on the outside, with pictures. The pictures were not of kings and queens. In Egypt, the kings and queens would have been pictured. In Assyria, there would have been pictures of kings. But at that time the Greeks had no royalty, and no use for kings and queens. So they painted Greek gods and Greek heroes and scenes from their fairy-tales or mythology. Many of these pictures on the vases are like illustrations in a book and are very graceful and lovely, but they do not fool you and make you think them real. To fool you, a picture has to be the same size as the person or object.

The pictures were usually in two styles. In the first style, they were painted black or dark on a reddish flower-pot or clay-color background. In the second style, the background was black and the pictures were reddish or clay-color as if the whole vase had been painted black, then the picture scraped out so the clay-color was left to form the picture.



Courtesy of the Metropolitan Museum of Art
A GREEK VASE WITH REDDISH
PICTURES AND BLACK BACK-
GROUND

CHAPTER 6

PICTURES OF CHRIST AND CHRISTIANS

THE name we know best, in all history, is that of Christ, and yet no one knows what He looked like. More paintings have been made of Him than of any man that has ever lived, but they are all imaginary. If we did have an actual picture of Him, it would probably be the most valuable picture in the world. The earliest picture of Him was made long after the time when He lived. It was painted by artists who never saw Him, so they had to guess how He looked.

The greatest city in the world at the time of Christ was Rome, Italy, and soon there were more Christians in Rome than in the country where Christ was born and lived. The early Christians were a secret society. Their society had to be secret, because the rulers of the people thought them dangerous and tortured them and even put them to death on the slightest excuse.

So the Christian society in Rome cut tunnels and cellar-like rooms—thousands of them—underneath the ground and there they held meetings. They were buried there, too, in places cut into the walls. These dark, damp caves, lighted only with small, dim lamps, were called catacombs. On the ceilings and sides of the catacombs the Christians painted pictures. One was a picture of Christ as the Good Shepherd, carrying a sheep across His shoulders. And where do you suppose they got the face they used for Christ? It was the picture of a Greek god!

Other pictures these early Christians painted were of Daniel in the

Lion's Den, Jonah and the Whale, and the Greek god Orpheus charming the wild animals with his magic music.

But most of the paintings in the catacombs were not what you would call real pictures. They were just decorations, but decorations that had some meaning to a Christian. They made pictures of a dove because that represented the Holy Ghost, which they believed came down from heaven in the form of a dove. They painted the cock that crew when Peter denied that he knew Christ. They painted an anchor which meant their religion was like any anchor that kept a boat in a storm from being dashed on the rocks. The anchor was their safeguard. They painted a fish because in the Greek language the first two letters were Christ's initials. They painted a vine because Christ said, "I am the vine." And so on.

About three hundred years after Christ died, a Roman emperor named Constantine became a Christian himself. Then, for the first time, the Christian society no longer needed to be secret. The Christians had no further fear of harm, so they came out of the catacombs to do their worshipping openly and built churches above ground and covered the walls with pictures and mosaics. Then for over a thousand years they painted pictures of people and scenes from the Bible.

The Greeks painted pictures chiefly of people without any clothes on, because they thought the human figure the most beautiful thing in the world and they did not want to cover it up. The Christian painters thought such figures immodest, and in the pictures they made they covered up the entire body with clothing, so that only the face, hands, and feet showed. They spent all their efforts in trying to make the face soulful and holy—not just beautiful. Often the background was painted in gold. Sometimes the pictures, instead of being painted, were made of mosaic. Paintings on plaster walls would peel and crumble and rub off, and mosaic would last. Mosaic pictures were often made on the floors of churches because such a picture made of stones was the only kind that would stand the tread of countless feet. It would not wear out, it would not wear off!



Courtesy of The University Prints

MOSAIC OF CHRIST, THE GOOD SHEPHERD

But the best paintings the Christian artists made were tiny illustrations or decorations for their Bibles and holy books. Some of these pictures were no larger than a postage stamp. Most of them were made by the monks, pious men who gave their lives to the service of the Church. All books were written by hand (we call them manuscripts), for printing had not been invented. These pictures for books were called illuminations and were made in gold and bright colors and were much more beautiful than the larger pictures on church walls and ceilings.

CHAPTER 7

THE SHEPHERD BOY PAINTER

PROBABLY you have never seen a great painting. Few people have, unless they have been abroad or have visited some of the largest art galleries in this country. All they have seen are small pictures of such paintings. That is about the same as seeing a picture post card of Niagara Falls instead of seeing the Falls themselves. We know what the Falls look like, so we know what some of the great pictures look like, but that's not the same as seeing the real thing. So you have to use your imagination to understand what a great picture in color is like, when all you can see is a small black and white copy of it.

The father of Greek painting, you may remember, was a man named Polygnotus. About two thousand years later, there lived a man who is called the father of Italian painting. His name is Cimabue—pronounced Chee-ma-boo'ay. Cimabue lived in Florence, which means the City of Flowers. It is in the central part of Italy. There are very few of his paintings in existence, and we are not sure that certain pictures are really his. And you may not see from the paintings we have why he was supposed to be such a great painter.

If Cimabue were painting now, probably he would not be considered great, but in his time he was thought very great, because he was so much better than any other painter had been for a thousand years before him. When he had finished painting a large picture of the Virgin Mary, the people of Florence thought it so beautiful they formed a procession and, with trumpets sounding and banners flying,

carried the picture through the streets from his house to the church where it was placed.

Another picture that Cimabue painted is of a monk, Saint Francis. Monks were holy men who spent their whole time in trying to be good and in doing good. Saint Francis started a society of monks called after him, Franciscans. Those who joined the society promised to try to live as Christ had lived. They could own nothing, they could have no money. They could not marry. They spent all their time in doing good. They worked to earn their daily bread and lodging. They shaved the top of their heads, leaving a circular place bare like a bald spot, and kept it shaved so that every one would know they were monks. This shaved circle was called a tonsure. They wore a rough brown robe with a hood, and they held the robe together with a coarse rope tied round the waist.

Before you turn this page, I must warn you not to expect a pretty picture. It isn't that. Very likely you will exclaim, "What an ugly old man!" The circle round Saint Francis's head is called a halo. A halo was painted round the heads of saints to show that they were holy persons. The spots on this saint's hands are not an accident. It is said that Saint Francis wanted so to be like Christ that an angel came to him and made on his hands and feet nail holes like those that Christ had received on the cross. These nail marks are called stigmata.

But it is not for what he did himself that Cimabue is famous. He is known chiefly as the teacher of some one who became a much greater artist. Cimabue was walking one day in the country, not far from Florence, when he came upon a shepherd boy tending his flocks. The boy, while watching his sheep, was drawing pictures of them on a piece of slate with a sharp stone. Cimabue, looking over the boy's shoulder, was amazed at the picture he saw and he asked the boy his name. "Giotto," the boy replied, which was the short pet name for *Ambrogio*. (Giotto is pronounced Jotto.)

Cimabue asked Giotto if he wouldn't like to go to Florence and

study drawing and painting. The boy was delighted to have such a chance. So, getting permission from his father, he went to live and study with Cimabue. When Giotto grew up, he painted many famous



SAINT FRANCIS

CIMABUE

pictures of Christ, the Virgin Mary, and especially of Saint Francis, whom Cimabue had painted.

Saint Francis lived in a town near Florence called Assisi. In Assisi there is a church built in his honor. In fact, there are two churches, one on top of the other. In the upper church, Giotto painted along the walls a series of pictures that told stories from the life of Saint Francis.

Among many wonderful things Saint Francis used to do was to preach sermons to the birds that gathered round him to listen. The picture below shows him doing this.

In those days, the paint used was not like that we have now. The



SAINT FRANCIS PREACHING TO THE BIRDS

GIOTTO

paint we use is usually made by mixing colored powder with oil (we call it oil paint), and artists paint pictures on canvas. But in those days, oil was not used in making paint, and the painting was not done on canvas. Artists mixed their powdered colors with water and painted on the fresh plastered walls. Or they mixed their colors with something sticky, like egg or glue, and painted on dry plaster, wood, or copper. The first kind of painting on fresh plaster was called fresco, which means fresh. The second kind of painting was called tempera, which means mixed.

The story is told that the Pope wished to have a picture painted and sent a messenger to Giotto to ask for a sample of the artist's work. Giotto dipped his brush in some paint and, with a single swinging stroke, painted a perfect circle on a piece of wood and sent this to the Pope to show how skilled he was. Do you think you could draw a perfect circle without a compass with one stroke of a pencil? Try it. Then try doing it with a brush.

But even if you can do this, it does not mean you are a great artist. It is easy to trace a drawing. It is not much harder to copy a drawing without tracing. Thousands of people can paint a basket of fruit, a vase of flowers, a view of the sea or the land. That is just a copy. Thousands can copy the painting of a great artist so well that you can hardly tell the copy from the original. But very few people are able to *invent* a picture out of their own heads and put the parts together to make a beautiful painting. That is what takes genius!

CHAPTER 8

THE ANGEL-LIKE BROTHER

THE houses where monks lived together are called monasteries. The monks are known as "brothers" because they are supposed to treat one another and every one else like brothers. In some churches the members call one another brother and sister.

In Florence, the City of Flowers, was a monastery called St. Mark's, for the Apostle who wrote the second book of the New Testament. In this monastery of St. Mark's lived a monk who, because he was so very good and holy, was called the Angel-like Brother. In his language, which was Italian, Brother Angel-like was Fra Angelico. It may seem strange that a monk should become a great artist, but Fra Angelico had a talent for drawing and painting and he painted Bible pictures on the walls of the rooms in his monastery.

The rooms where the monks slept were called cells because they were so plain and bare that they were almost like cells in a prison. There were forty of these cells and Fra Angelico spent most of his life in painting them so that the monks would have scenes from the Bible to look at and think about. These pictures were painted in fresco, of course. Besides these, Fra Angelico painted movable pictures on wooden panels in tempera, which, as I have told you, was color mixed with something sticky, like egg or glue.

Fra Angelico lived about a hundred years later than Giotto, but his style was very much like Giotto's style. It is said that always before starting to paint a picture, he prayed long and earnestly. Then

when he did set to work on a painting, he never changed a brush stroke, but left everything he did just as he first put it down. For he believed that the Lord had guided his hand, and that therefore no correction should be made. Of course, being such a religious man, he painted nothing but religious pictures—pictures of saints and angels—and he received no pay whatever for his work.

There was one religious subject that painters of that time loved to paint. It is called the Annunciation. You remember the Bible says that an angel came to the Virgin Mary and told her that she was to have a Son who was to be Christ the Lord. This is called the Annunciation—that is, the announcement to Mary that she was to be the



Courtesy of The University Prints
THE ANNUNCIATION

FRA ANGELICO

mother of the Lord. Fra Angelico painted an Annunciation which, I think, you'll agree is very sweet and lovely. In this picture, the Virgin Mary is seated on a stool on the porch of her home, with her arms folded across her breast. An angel messenger who has just descended



SAINT PETER

FRA ANGELICO

from heaven, half kneels to tell Mary that she is to have a Divine Son.

The monks of St. Mark's were not allowed to talk to one another except at certain times, as a special treat. They had to keep silent most of the time. Think of keeping silent, for one single day, or even for one hour, if there were any one around to talk to! That rule was made so that the monks might keep their thoughts always on God and religion and not waste their time in gossip or other worthless talk. Over a doorway in St. Mark's monastery, Fra Angelico painted a picture of Saint Peter with his finger on his lips, to remind the monks that they must be silent.

The monastery of St. Mark has been made a museum for the paintings of Fra Angelico. It now contains most of his movable paintings as well as the fresco paintings on the cell walls. One of these movable paintings now in the St. Mark's monastery is a picture of the Virgin

Mary with the Christ Child. The Virgin Mary is called "My Lady," and this, in Italian, is Madonna. So such a picture is called a Madonna.

For hundreds of years, thousands of pictures of the Madonna were painted. In fact, every artist painted at least one Madonna and often many Madonnas. Each church had to have one or more Madonnas. And every family that could afford to have any painting at all had a Madonna hanging on the walls, just as every family nowadays usually has at least one Bible in the house.

The Madonna that Fra Angelico painted is in a broad gold frame. Usually the frame of a picture is just a frame—a fence to separate it from the wall and other things on the wall—and has no beauty in itself. But on this particular frame, Fra Angelico painted twelve angels playing different musical instruments. Thousands of colored post cards and other copies of these angels have been made, and you may have one of the pictures in your own house. Have you?

CHAPTER 9

BORN AGAIN PAINTERS

THE old Egyptians believed they would come to life again in a thousand years perhaps, after they had died, but they never did. The old Greeks didn't think much about coming to life again, but about two thousand years after the old Greek artists had died, people were born in Italy who in many ways were like those old Greeks. Indeed, these Italians were so like the old Greeks that it seemed almost as if the old Greeks had been born again, and were living once more—not in Greece, but in Italy. So we call this time the Born Again time, or by the long name Renaissance, which means Born Again.

One of the first artists of the Born Again time was a boy who had a very insulting nickname. Now, nicknames stick to some people when they grow up. But it seems strange that this boy, who became a great painter, was always called by his insulting nickname. To this very day we know him by the name Masaccio (Ma-zat'cho). That may not sound very insulting because it's Italian, but it means "Dirty Tom."

Masaccio was a very poor boy—perhaps that is why he was dirty—and he died young. When he died he was still very poor and still very dirty. No one seemed to like him or his painting while he lived and some people even say he was poisoned by his enemies. But after he died, people thought differently about him. Great artists thought his paintings so good that they went to the place where they could be seen, to study and copy them.

The reason other artists studied and copied his pictures is that Masaccio had found out how to do something that no artist before him



Courtesy of The University Prints
 ADAM AND EVE DRIVEN
 FROM EDEN MASACCIO

had been able to do. Masaccio's pictures did not look flat. He painted pictures so that you could see back *into* them. Perspective, you remember, we call it.

For thousands of years artists had tried to get perspective, but they had not succeeded very well. So the Renaissance artists wanted to find out how Masaccio got perspective. One of his famous frescoes was a picture of the angel driving Adam and Eve out of the Garden of Eden.

One of these painters who studied Masaccio's frescoes was a monk named Fra Filippo Lippi—that is, Brother Filippo, which means Philip though it is spelled with an *F* instead of *Ph*. Brother Filippo was, however, not a good and holy monk like that religious painter, Brother Angelico. Brother Filippo was a good painter, but a Bad Brother. It is said that he was bored with being good and with being a monk, so he ran away from his monastery. After many wild adventures, he was captured by pirates and made a slave. One

day he drew with a piece of charcoal a picture of his master and the likeness was so good that his master set him free.

Brother Filippo made his way back to Italy and was hired to paint a picture of the Madonna for a convent. A convent is a building where women called nuns live. Nuns have given up their lives to religion and they live together as monks do in a monastery.

One of the nuns in this convent, a beautiful young girl, posed as

the model for Filippo's painting of the Virgin. Now, neither a monk nor a nun is supposed to fall in love with any one, but, in spite of what he was supposed *not* to do, Filippo made love to the nun and, in spite of everything, they ran away together. They had a son whom they named Filippino which means "Little Filippo." Filippino became a great painter, too, even greater than his father.

Another artist of this time has a name—or rather two names—I like to say because each name has "ozzo" in it, a kind of rhyme. It is Benozzo Gozzoli (Ben-ot'zo Gotz'o-lē).

In the city of Pisa is a peculiar tower that does not stand straight, but leans to one side. In the same city is another peculiar thing. It is a cemetery. The peculiar thing about this cemetery is that the ground for it was brought all the way from Jerusalem so that the earth in which people were buried would be especially holy—the same ground that Christ had trod. It took fifty-three ship-loads of this holy earth to make the cemetery. It is called the Campo Santo, which means Holy Field.

Around the Campo Santo is a wall and on the inside of this wall Benozzo Gozzoli painted scenes from the Old Testament—the story of Noah, the Tower of Babel, David, Solomon, and so on—twenty-two of them. There were crowds of people in each picture and often buildings in the back of the picture (the *background*, we call it).

In most of the pictures which Benozzo Gozzoli painted, as well as in those of other painters of this time, the clothing of the people was not the kind of clothing the people of Bible times wore. And the buildings in the background were not those of Bible times or Bible places at all. The artists had not visited Bible lands and didn't know what kind of clothes the Bible people wore or what kind of buildings they built, so they made the clothes and buildings like the Italian clothes and buildings of their own time.

So here are three painters to begin the Born Again time, the early

Renaissance, the hundred years from 1400 to 1500. These three painters may not seem to you much like old Greeks born again, but be sure to remember them—Dirty Tom, the Bad Brother, and the Cemetery Painter, who lived and worked just before Columbus discovered America.

CHAPTER 10

SINS AND SERMONS

ALMOST the first date that every boy and girl learns is 1492, the year that Columbus discovered America. Columbus was an Italian, but most of the people in Italy at that time were not interested in Columbus or what he was doing. They were interested in just two things. First they were interested in having a good time. The second thing they were interested in was art. They were interested in Greece and its art and learning—not in discovering new countries. This time was known as the beginning of the High Renaissance and began just about 1492.

When you look at a globe of the world, you can hardly find Italy, no larger than your little finger, sticking down into the Mediterranean Sea. And yet in this little finger of land lived, at the time we are talking about, the greatest artists there have ever been. We call these artists the Old Masters. It may seem strange that just there in Italy the greatest artists should have been born and lived, all within a few miles of one another. One explanation is that Italy was the center of the Christian religion, and up to this time Italian artists painted no pictures but religious ones.

An artist named Botticelli (Bot-tee-chel'lee), was one of the first Italian artists to paint pictures of things that were not told about in the Bible. Botticelli painted religious pictures too, but he liked especially to paint pictures of Greek gods and goddesses and other fanciful subjects, for the Renaissance was a time, as I've told you, when every one was interested in Greek art, history, and learning. Botticelli had

a peculiar style of painting. His women usually had long legs and seemed to be dancing or floating along the ground instead of standing or walking. They were clad in very filmy, gauzy gowns as thin as a veil that showed their figures almost as if they had nothing on. Here is one called "The Allegory of Spring."



Courtesy of The University Prints
THE ALLEGORY OF SPRING

BOTTICELLI

Now, at the time of Columbus, there was living and preaching in Florence a monk named Savonarola, who some people think was mad. At any rate, he was such a powerful preacher that those who heard his sermons would do almost anything he told them to. He seemed to hypnotize them. Most of the people in Florence were very wicked. They thought of nothing but pleasure and having a good time, no matter how bad they were when they had a good time. Savonarola



DETAIL FROM THE ALLEGORY OF SPRING

BOTTICELLI

preached against the sins of this world, and prophesied death for those who did not repent and mend their ways. He preached against people who played games of cards or dice, who used rouge on their faces, who wore ornaments, who danced, who sang songs that were not hymns, or wrote books or painted pictures that were not religious. The people of Florence began to repent and so one day they brought all their ornaments and finery and fancy clothes and bad books to the public square and made a huge bonfire of them. It was much higher than a house. Many ugly things were burned up, probably most of them ought to have been burned. It might be a good idea if, once a year, we were to gather together all the flimsy ornaments, trashy pictures, and other rubbish in our houses and make a huge bonfire of them.

Botticelli had heard Savonarola preach, and he felt that he too had committed a sin in painting pictures of gods and goddesses and other subjects that were not religious. So he brought his paintings that were not religious and threw them on the bonfire. Fortunately for us, only a few of Botticelli's pictures were burned and his best ones are still preserved in art galleries.

Here is one of the religious kind, a Madonna. Notice that it is circular in shape, not square-cornered as most pictures are. Circular pictures are called *tondos*, which means round.

This is called "The Madonna of the Coronation" (the crowning), because two angels are putting a crown on Mary to show that she is the Queen of Heaven. She is writing a song in a book while the infant Jesus seems to be guiding her hand. The song sung in church to-day is called the Magnificat because that is the Latin name, and so the picture too is often called "The Magnificat." The song is a thanksgiving to God that He has chosen Mary from among all the women in the world, to be the mother of Jesus.

The boy holding the ink-well and the one holding the book were real

boys. They did not live in the time of Christ, but in the time of Botticelli, so it may seem strange that they should have been put in the picture, but the Old Masters often did that sort of thing. When these two boys grew up both of them became popes.



THE MADONNA OF THE CORONATION

BOTTICELLI

The people whom Savonarola said were so wicked could stand him no longer, and even some of his own followers turned against him. Finally they got hold of him and hung him on a cross placed in the public square. Then, not satisfied with that, they burned his body at the stake. And not satisfied with that, they threw his ashes into the river.

There was a young painter in Florence who, as Botticelli had done,

had also burned all of his pictures that were not religious. He was so shocked by the way in which Savonarola had been treated that he gave up painting and became a monk himself. He took the name of Fra Bartolommeo and went to live in the monastery where Savonarola had lived and also where Fra Angelico before him had lived—the



SAVONAROLA

FRA BARTOLOMMEO

monastery of St. Mark's. For six years he never painted a stroke or touched a brush. He did nothing but pray. Then he was persuaded to start painting once more, and after that he made many beautiful pictures—all of them, of course, religious. One picture he painted was of a saint named Sebastian. Saint Sebastian was shot to death with arrows, because he was a Christian. The picture which Fra Bartolommeo painted for his monastery showed Saint Sebastian without clothes and with arrows sticking in his body. The monks thought this

so immodest that at last the picture was removed from the monastery.

Fra Bartolommeo painted a picture of his hero Savonarola. Now, Savonarola was not handsome at all. In fact, he had a very big nose, and was really ugly, so ugly that his enemies used to joke about it. But the painting of him that Fra Bartolommeo made shows that a picture can be great without being pretty. Fra Bartolommeo didn't change Savonarola's features at all. He painted the man just as he was, but the picture is beautiful because it shows some one who bore the most terrible suffering and agony for what he believed was right.

Most artists, when they draw or paint pictures of people, have real men or women to pose for them. Models, we call them. Instead of live models, Fra Bartolommeo used a wooden jointed doll which he dressed and arranged in the position he wanted the figure to be. Such a wooden doll is called a lay-figure or one to draw from.

Fra Bartolommeo was the first painter to put baby angels at the foot of his pictures of the Madonna, and other painters copied this idea.

CHAPTER 11

A GREAT TEACHER AND A "GREATEST" PUPIL

MANY towns are named for persons—Washington, St. Louis, Jacksonville, and others. It is not so often that persons are named for towns, but here is a painter who was named for one. The town was Perugia, in Italy, and the man was called Perugino (Pay-roo-jee'no). He wasn't christened Perugino, but most people have forgotten what his real name was. Perugino wasn't even born in Perugia, but he went to live in that town and started a school for painters there.

You can tell whom some letters are from before you open them, just by the handwriting on the envelop. In the same way you can tell a picture that Perugino has painted even if it hasn't his name on it. He painted Madonnas and saints and after you have seen several of them, you can recognize others he did, even though you may not be able to tell just how or why. Usually they have their heads bent to one side, a very sweet expression, and usually the figure has one knee bent.

Perugino painted many beautiful pictures, but he is chiefly famous because of one of his pupils. This pupil was a boy who many people feel became the greatest painter of all time. His name is Raphael. Raphael studied with Perugino for three years. By the time he was nineteen years old he had learned everything that his master could teach him, so he started out for himself. He died when he was thirty-seven years old, but he was such a hard worker that he had painted or drawn over a thousand pictures by that time. Indeed, we are told that he died from overwork.

Raphael must have done about one picture a week, and some of his paintings are very large and have many figures in them. The only way he could have made so many, and the way we know he did, was to have his pupils help him. He always painted the faces himself, but his pupils painted the clothes and hands and other less important parts of the pictures.

It would take several books with a picture on each page to show all of Raphael's paintings. One of the most famous is "The Madonna



THE MADONNA DEL GRAN DUCA
RAPHAEL

del Gran Duca." It was called so because it was painted for a grand duke who prized it more highly than all his riches. In fact, he was not willing to have it hanging on the wall of his palace or placed in a vault

for safe-keeping. He wanted it with him all the time and is said to have carried it with him in his carriage wherever he went so that it would never be out of his sight.

The grand duke is now dead, of course, and "The Madonna del Gran Duca" is in an art gallery in Florence, where every one can see it as often and as long as he likes, if he can afford to go there. How fortunate, you may think, for the people who live in Florence, who can see it every day without cost! Yet I know people living in Florence who have never seen it. Strange? That seems to be the way with people. Some people go thousands of miles and pay thousands of dollars to get there, while those who live almost next door don't or won't "go across the street" to see the picture.

Raphael painted another Madonna called "The Madonna of the Chair." It is a tondo. Do you remember what that is? It is a round picture.

The story is that Raphael was walking one day in the country when he saw a young mother sitting in a doorway with her little baby.

"What a beautiful madonna!" Raphael said to himself. "I must paint her now, on the spot where she is, before she changes."

He looked around for something to paint on and, in a rubbish heap near by, he saw the round top of a barrel. So he sketched the young woman and her baby then and there with a pencil. And as soon as he reached his home he made the painting of them.

But the most famous picture in the world is another Madonna by Raphael called "The Sistine Madonna" or "Madonna di Sansisto" from the name of the church where it was first placed. It is not there now, however, but in a gallery in Dresden, Germany, where it has a room all by itself, for no other picture is thought worthy to be hung in the same room.

Many Madonnas that I have shown you may be beautiful themselves, but the Holy Child in the pictures may not be beautiful at all. He often looks like a little old man or just a very fat baby, and not

a bit what we feel the Son of God should look like. The Christ Child in Raphael's "Sistine Madonna" is very beautiful. Leaning on the edge of the frame, beneath the feet of the Madonna, are two little



Courtesy of The University Prints
THE SISTINE MADONNA

RAPHAEL

angels or cherubs. This idea Raphael got from Fra Bartolommeo, who was a great friend of his. The two other people in the picture who are worshipping the Madonna are Pope Sixtus and Saint Barbara. They, of course, did not live at the time of Christ. They were put in this picture just as Botticelli put two living boys into his picture of the Coronation.

CHAPTER 12

THE SCULPTOR WHO PAINTED PICTURES

AT THE time of the Renaissance, young girls used to wear golden garlands or wreaths around their hair, as girls nowadays wear bracelets round their wrists or rings on their fingers. One goldsmith was so famous for the garlands he made that he was called Ghirlandajo (Gear-lan-dah'yo), which means a maker of garlands. Ghirlandajo gave up making garlands and began to paint pictures instead. He made many very fine pictures, but the chief thing he made was an artist, Michelangelo (Mike-el-an'je-lo). Michelangelo studied with Ghirlandajo for three years, and the teacher paid the pupil, instead of charging for his teaching!

Ghirlandajo was probably a good teacher of painting, but young Michelangelo liked making statues better than painting pictures. So he left Ghirlandajo's workshop and began to study sculpture.

Now, Michelangelo was not a very easy person to get along with. He didn't mind saying what he thought, even if it hurt other people's feelings. One day he said he thought another young sculptor's statue wasn't much good. This probably was true, but the other young sculptor got very angry and hit Michelangelo on the nose. He punched him so hard that the nose was broken. All the rest of his life Michelangelo had an ugly crooked nose.

Michelangelo soon became famous as a sculptor—a man who makes statues or sculpture. He moved from the city of Florence to Rome, and there he worked for the Pope, who liked Michelangelo's work

so much that he didn't want him to make statues for any one else.

This Pope wanted to have pictures painted on the ceiling of the Sistine Chapel in Rome. The Sistine is a chapel in the Vatican, the palace of the Popes. It has a very high curved ceiling. The Pope asked Michelangelo to paint the pictures on the ceiling, but the artist said that he was a sculptor and didn't at all want to paint. Then some enemies of his spread around the story that he didn't want to do it because he wasn't good enough at painting and was afraid to try. This made Michelangelo angry. He made up his mind he would show that he could do the work as well as any painter in the world.

First of all, he had to have a scaffolding built in the chapel. The scaffolding was a wooden framework with boards across the top near the ceiling so that Michelangelo could climb up on the boards and paint.

If you stop to think a moment, you will see how hard it must have been to paint pictures on a ceiling. The painter had to lie on his back on the scaffolding. He had to be so close to the ceiling that he could see only the part right above him, unless he climbed down the ladder and looked up. The ceiling of the Sistine Chapel is very large. The pictures on it had to be large so people could see them plainly from the floor down below. How would you like to draw the head of a man when you could not see where his feet were to be? Even if you were a good painter, that would be hard to do. And if Michelangelo put too much paint on his brush the paint would drip down all over him. No wonder he didn't want to do the job!

But once he had started, nothing could stop him. At first he had some other artists to help him, but he found the helpers couldn't do the work just as he wanted it, so he sent them away and kept on all by himself.

It took him four and a half years to finish the ceiling, and that was really a very short time when you think of the work that had to be done! The Pope kept telling him to hurry and Michelangelo even



CREATION OF MAN

MICHELANGELO

moved his bed into the chapel so he would be able to spend more time painting.

The Pope also kept telling him how the pictures should be done. Michelangelo didn't like this, because he felt he knew more about such things than the Pope did. So one day when the Pope was standing on the floor calling up advice to the painter, Michelangelo let a hammer drop from the scaffolding. He was careful to let it fall quite near the Pope—near enough to scare him. After that the Pope stayed out of the chapel while Michelangelo was painting!

Finally, the ceiling was almost finished. Michelangelo wanted to add some touches of gold paint, but the Pope was so anxious to have the chapel opened that the artist had the scaffolding taken down before the gold was put on.

Then people came from all over Rome to see what the famous sculptor had done as a painter. What they saw was a painting of Bible pictures. Around the edges of the ceiling were huge figures of prophets who had foretold the coming of Christ. Down the middle of the ceiling were shown pictures of the Old Testament stories—The Six Days of Creation, Noah's Ark and the Flood, and others. The pictures were drawn so well that people were astonished.

The men and women painted on the ceiling look strong and solid. They look like statues, which of course are the shape of real people all around, and not just flat pictures. So we call Michelangelo's paintings *sculpturesque* or like sculpture.

In this photograph you see a small part of the ceiling. It shows the Creation of Man. Notice what great shoulders and muscles Adam has.

Almost thirty years after the ceiling was painted, Michelangelo was asked to paint a picture on the wall over the altar at one end of the Sistine Chapel. The wall was already covered with a painting by Perugino which had to be destroyed. Michelangelo's painting that took the place of Perugino's is called "The Last Judgment." It is one of the most famous pictures ever painted, though it is not so great as the

six ceiling pictures. It is crowded with the figures of men and women rising from the dead on Judgment Day.

Michelangelo painted very few other pictures. The only small finished painting that we are sure was done by him is a tondo of the Holy Family. It shows the Madonna on her knees, holding over her shoulder



Courtesy of The University Prints

THE HOLY FAMILY MICHELANGELO

her little Son so that Joseph can see Him. The picture shows how this artist liked to paint people in strange positions.

Michelangelo lived to be a very old man. As he grew older he seemed to grow crosser and harder to get along with than ever. But though he was a cranky old fellow, every one respected him and admired him as one of the greatest artists in the history of the world. In the sculpture part of this book I'll tell you more about him.

CHAPTER 13

LEONARDO DA VINCI

PUT this line in front of a mirror and then you can read it quite easily. CAN YOU READ THIS?

That is what people found they had to do with notes written by a very great man named Leonardo da Vinci (Lay-o-nar'doe dah Vin'chee). It is not because he wrote from right to left across the paper, that we call him a very great man, though! It is because he knew how to do more things well than any one else in the whole world. Probably he wrote from right to left because he was left-handed.

Leonardo da Vinci lived during the Renaissance, in Italy. He was born some years before the painter Raphael and was still alive many years after Raphael died. Among the many things Leonardo da Vinci did well was painting. Some people still think he was the best painter that has ever lived. And yet he was interested in doing so many other things besides painting, that he painted only a few pictures in his long life.

One of Leonardo's paintings is in the Louvre, an art gallery in Paris. The picture is called "Mona Lisa" (Mo'nah Lee'sah). Some years ago this famous picture was stolen right from the wall of the Louvre and newspapers all over the world printed the story with just as big head-lines as if a great king had died or a big ship had been sunk at sea. Luckily, it was found finally and put back in the Louvre, though the real thieves were never caught.

The "Mona Lisa" is the picture of an Italian lady. On her face is a faint smile. If the artist had changed the painting the least bit, there

might have been no smile there at all. It is a puzzling smile. Mona Lisa seems to be smiling at something that no one else knows anything about.

There are other things to notice besides the smile. Notice how solid the woman seems—not flat like a cardboard woman, but as if she were a real person. Leonardo could make her look real because he understood how to use dark and light, how to make the bright part fade into the shadows. He was the first painter to understand how to do this.

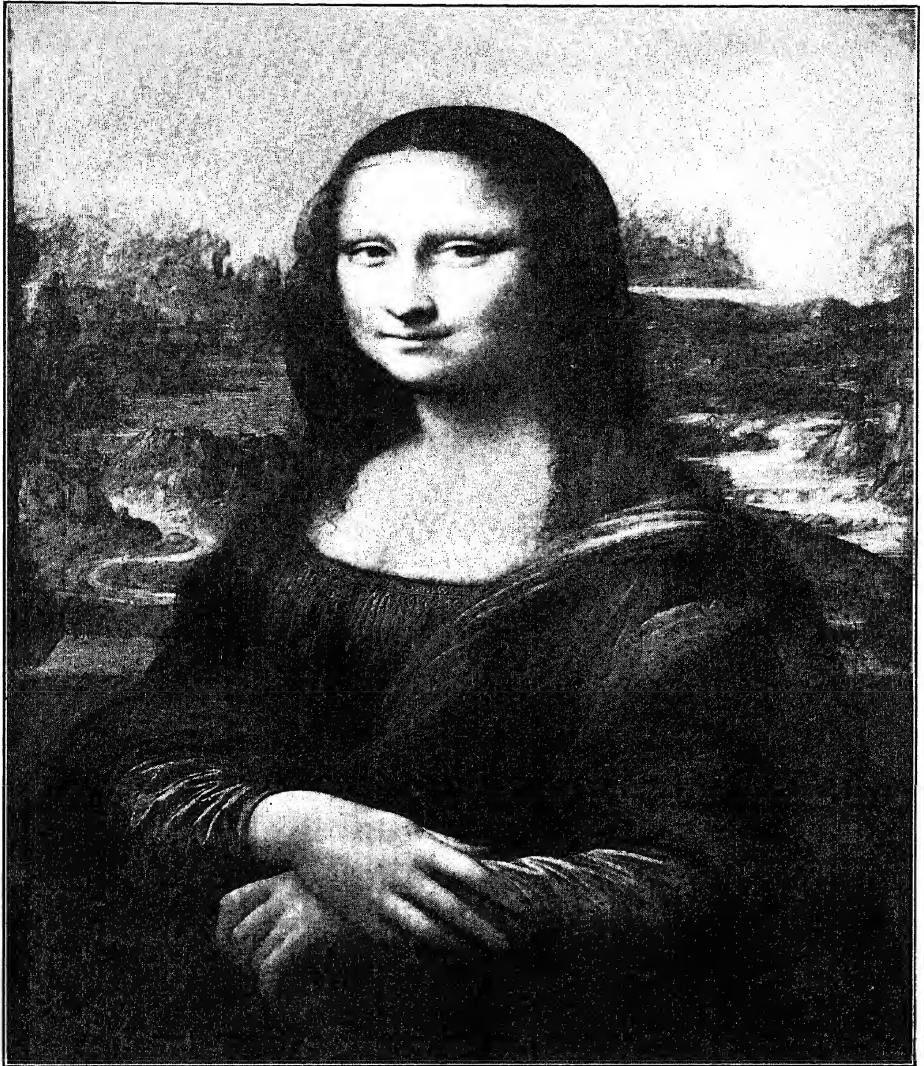
Next notice the background, the part of the picture behind the woman. It is a landscape, with a stream and hills and mountains. When you look at a real landscape, you know you can't see things far away quite as clearly as things close to you. That is because of all the air between you and the things that are far away. Although you can't see this air, you can understand that the more air you look through, the dimmer things seem. Leonardo da Vinci was a great enough painter to make the landscape look as if it really were far away. He was the first painter who understood how to do this, too.

Another painting by Leonardo is not in an art gallery, where it would be carefully taken care of, but is in a low, damp room in a monastery in Italy where it has been badly damaged by moisture. It is one of the world's greatest paintings, but it will never be put in an art gallery, because Leonardo painted it directly on the wall.

The picture is known as "The Last Supper." It shows Christ and the twelve Apostles seated at a long table. Leonardo chose to picture the moment when Christ has just said, "One of you will betray me!"

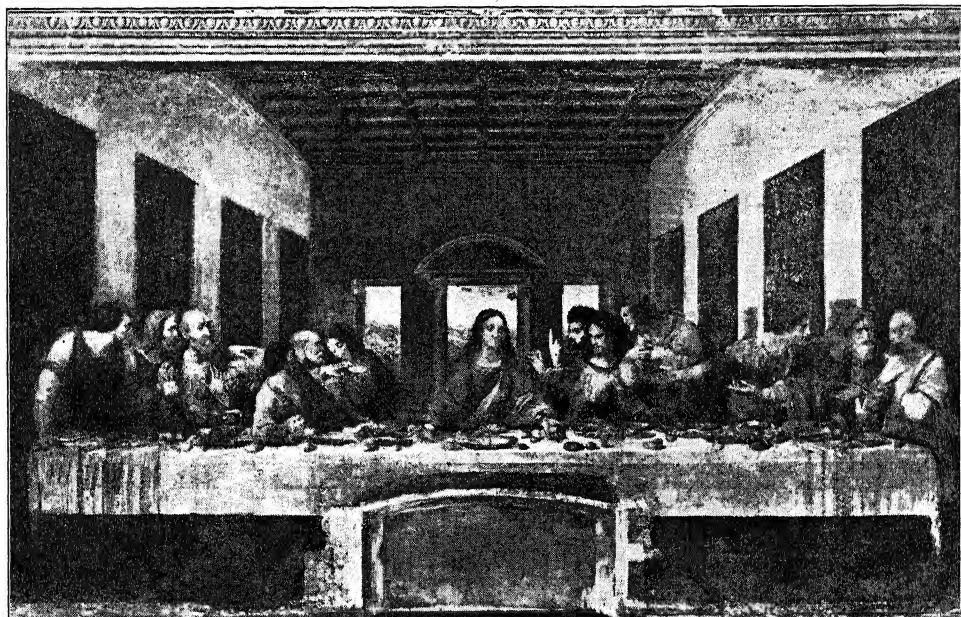
Can you not imagine how absolutely terrible to these Apostles would be the thought of betraying their beloved Master, whom they knew as the Son of God? Leonardo shows by their gestures, their hands, the expression of their faces, how each Apostle feels when he hears these words.

To show what men in a painting *feel* is not easy. A painter cannot,



MONA LISA

DA VINCI



Courtesy of The University Prints

THE LAST SUPPER

DA VINCI

of course, make the people in his pictures *speak* what they feel. If he wants to show their feelings, he must do it by showing how people look when they are thinking a certain thing. Leonardo visited deaf and dumb people, to learn how they showed their feelings when they were excited or happy or frightened or angry. This helped him make the people in his pictures show just the feelings he wanted them to—even if they could not speak.

Not many years after "The Last Supper" was painted, the paint began to come off the plaster of the wall. One reason for this was that Leonardo painted on the dry plaster. Michelangelo and other wall painters always had painted on the plaster when it was still fresh and damp. When they did this, the paint sank into the fresh plaster and

couldn't peel off unless the plaster came off, too. You remember I told you this kind of painting is called fresco, which is the Italian word for fresh. Leonardo was interested in trying new ways of painting, and so, unfortunately, he didn't use the old-style fresco way for his "Last Supper."

When the paint had flaked off in many places, other artists painted over the picture where they thought it needed touching up. After a time a great part of Leonardo's painting was covered by the much poorer painting of these much poorer painters. Worst of all, the monks decided to cut a door in the wall. The top of the doorway was made right in the middle of the lower part of the painting, and of course the hammering to make a hole through the stone wall jarred off more of the paint.

Later, Napoleon led his armies into Italy, and some of his soldiers used the room of "The Last Supper" as a stable for their horses! They even amused themselves by throwing their boots at the painting to see if they could hit Judas Iscariot, the Apostle who betrayed Jesus.

So year by year this wonderful painting became more and more a ruin, until there was danger that it would be lost altogether. Finally, a wise Italian found a way of making what was left cling to the wall so it would not come off. Then he managed to take off all the paint put on by the other painters, so that now the picture is in better condition than it has been for hundreds of years.

We have only about three or four other paintings by the great Leonardo da Vinci. One that every one likes is called "The Virgin of the Rocks." It shows the baby Jesus and His mother seated on the ground with the little Saint John and an angel. They seem to be in a place of caves and dark rocks. Through openings in the rocks we can see the bright blue of a waterfall and the green of plants.

Leonardo knew more about plants and flowers than any one else of his time. One of the paintings of a pupil of his named Luini

(Loo-ee'nee) is named for a flower. It shows a young woman holding a columbine and so this painting is called "The Columbine." Luini's women have the same kind of half-smile that Leonardo painted so well. Luini was a good painter, but not nearly so good as Leonardo da Vinci, the wonderful genius whom he imitated.

CHAPTER 14

SIX VENETIANS

VENICE is a city where the streets are water and where you take a boat instead of an automobile to go from place to place. Nowadays Venice belongs to Italy, but in the time of the Renaissance, though Venice was in Italy, it didn't belong to Italy. There wasn't any kingdom of Italy then, and Venice was an independent state, a republic that governed itself. Venice had its own army and navy, its own ruler called the Doge, and its own way of doing things. It had its own great painters, too, during the Renaissance—painters still famous above all others for the wonderful colors they gave to their pictures.

In the early years of the Renaissance there was a painter of Venice named Bellini (Bel-leen'ee) and he had two sons who also became painters. The sons were better painters than their father. One of the Bellini brothers taught painting to two young men who became better painters than any of the Bellinis. These two men were called Giorgione (Jor-jone'ay), which means Big George, and Titian (Tish'an), which just means Titian. Three Bellinis, Giorgione, and Titian—five men with only three names to remember.

I wish I had room to tell you more about the Bellinis. I think you would like their pictures of the Doges, the rulers of Venice. But there isn't room in this chapter for all of them, so we'll begin with Giorgione.

Giorgione is called one of the greatest of painters. Like Leonardo da Vinci, he left very few pictures that we are sure he himself painted. A famous painting called "The Concert" is thought by most people to

have been painted by Giorgione, but others think it was painted by Giorgione's friend Titian. "The Concert" shows the head and shoulders of three men. One of these men is seated at a clavichord. Do you know what a clavichord is? It is a musical instrument like a piano that was used before pianos were invented. The second man has a violin in his hand, and the third wears a big hat with feathers on it that makes him look like a woman. In our house, when I was a boy, we had a photograph of "The Concert" on the wall and I always thought the man with the big hat *was* a woman until I grew up.

Unfortunately Giorgione didn't live long enough to paint many pictures. A terrible disease called the plague spread through Venice. Giorgione caught the plague and died when he was only about thirty-two years old.

His friend Titian lived to be a very old man, and so he had time to paint many more pictures than Giorgione. Titian was especially good at painting portraits of the noblemen of his time. One of these portraits is called "The Man with the Glove." No one now knows who the man with the glove was, but almost every one likes the picture. How do you like it? Look on the opposite page.

Titian could paint other kinds of pictures besides portraits. He painted a picture for an altar in a church in Venice called "The Assumption," which shows the Madonna entering heaven. The Venetians liked it tremendously. They especially liked its rich glowing color, for Venice itself was full of color, with its deep blue sea on every side and its marble palaces gleaming in the brilliant sunlight.

Venetians even liked pictures painted on the outside of their buildings, to add to the bright colors of the town. Both Giorgione and Titian made many paintings on the outside house walls, but all these have now disappeared, washed away by the weather.

At last after a long life of painting, Titian died—some say from the same disease that had killed Giorgione, the plague.

There were still great artists left in Venice, however. One of these

was called Tintoretto, which means Little Dyer, because his father was a dyer. Tintoretto was much younger than Titian. When he was still a boy he was sent to Titian's studio, or workshop, to learn painting.



THE MAN WITH THE GLOVE TITIAN

For some reason Titian let him stay at his studio for only ten days and after that Tintoretto had to teach himself to paint.

He too painted many pictures on the outside walls of buildings, but these have washed away like Giorgione's and Titian's. Titian had always been careful to make good bargains when he sold his paintings, but Tintoretto didn't seem to care for money. He was satisfied to take much less for his pictures than they were worth. Often he even gave them away.

One of Tintoretto's greatest undertakings was to paint pictures for the walls of a building called the Scuola di San Rocco in Venice.

Michelangelo had made his wall paintings on wet plaster, Leonardo had made his on dry plaster, but Tintoretto made his on canvas. Then the canvas with the painting on it was fastened to the wall. The San Rocco pictures were fastened to the wall.

Tintoretto used to make little clay figures to use as models when he painted. He worked very quickly and so he was able to paint a great many pictures in his lifetime. Most of them are full of energy and action. Some of his figures seem to be rushing through the air. So much action and movement made his pictures very different from the quiet ones of early Italian painters. Tintoretto's were more like Michelangelo's energetic paintings. But Tintoretto also had the glowing colors of Titian.

Over his studio door he put these words: "The drawing of Michelangelo and the color of Titian." Sometimes he went beyond Titian, whose colors were golden browns and rich reds and greens. Tintoretto's later pictures contained soft shades of gray and had a silvery finish rather than a golden glow.

One of Tintoretto's famous paintings is called "The Miracle of Saint Mark." The story goes that Saint Mark had a faithful servant who was sentenced to be tortured to death for being a Christian. Saint Mark was away when this happened. The servant was stretched on the ground in front of the judge's chair and the torture was about to begin. Suddenly the tools broke in the executioner's hands as Saint Mark appeared in the air above. He had come to save his servant.

Tintoretto's picture shows Saint Mark rushing through the air above the executioner, but nobody in the picture, except a little baby, has noticed him. All are looking at the broken tools of the executioner.

When Tintoretto was an old man he was given the order to paint a huge picture of Paradise. The picture was to be large enough to cover a wall space thirty feet high and seventy-four feet long.



THE MIRACLE OF SAINT MARK

TINTORETTO

Tintoretto set to work and finished the largest painting on canvas in the world. His "Paradise" shows Christ and the Madonna seated on clouds in heaven. Below them are crowds of saints and angels, over five hundred figures altogether. This painting was Tintoretto's last great work. He died soon after finishing it.

Some of Tintoretto's paintings were much better than others. The Venetians used to say he had three pencils, one of gold, one of silver, and one of iron. By this they meant that some of his pictures were wonderfully done, some were only fairly well done, and some were

poorly done. Perhaps this is why people have had so many different opinions about Tintoretto.

Venice had great painters after Tintoretto. But certainly the Bellinis, Giorgione, Titian, and Tintoretto are enough great men to squeeze into one little chapter!

CHAPTER 15

A TAILOR'S SON AND A MASTER OF LIGHT

IF YOUR name were Andrea, and if your father were a tailor, and if you were called Andrea of the Tailor, people would always be asking, "Can you paint pictures?" For Andrea of the Tailor was a famous painter; one of the Born Again painters of Florence. Italians, of course, didn't use English words for the painter's name. What they called him was Andrea del Sarto, which is the Italian way of saying Andrea of the Tailor.

When this son of the tailor grew up he married, strange to say, the widow of a hatter—a man who made hats. She was a beautiful woman but was always scolding and was very extravagant and selfish and spent Andrea's money as fast as he could make it.

Two of Andrea's paintings were sent to France and when the King of France saw them, he wanted the painter to come to France and paint for him. So to France Andrea went. The king was pleased with his work and paid him well, but soon Andrea got a letter from his wife telling him to come back to Italy. The king made him promise he would return to France very soon and gave him money to buy some pictures in Italy to bring back to France.

And now we see that Andrea's pictures were better than he was, for Andrea was what we call a "weak" man. When he got home to Italy, his wife made him build her a fine house. And when Andrea found his own money wasn't enough for the house he used the king's money! Of course, after such dishonesty, he was afraid ever to go to France again.

In Italy, Andrea painted several pictures in fresco on the walls of monasteries. You remember I told you what fresco painting was. The artist painted on the plaster while it was still wet so the colors would soak into the wall. If a painter made a mistake in fresco painting, he couldn't rub it out, because the picture was part of the plaster. So most artists touched up their fresco paintings after the plaster was dry. Andrea, however, never did this. He could paint so well that he didn't have to correct mistakes after the picture was finished. There weren't any mistakes to correct.

Andrea painted in oil as well as in fresco. You remember, don't you, that the early Renaissance painters used to mix their paints with egg or glue? Then some one discovered that it was better to mix paints with oil, and soon all the painters were using oil paints except for fresco. In the old egg or glue way of painting artists had to paint on a board covered with a kind of smooth plaster called *gesso* (jes'so). With oil paints they could paint their pictures on canvas or boards without using gesso. This was much easier and it also made the pictures look better.

Andrea's most famous oil painting is a Madonna. The baby Christ is in her arms, on one side stands Saint Francis, on the other Saint John, with two little angels between them. The picture has a peculiar name. It is called "The Madonna of the Harpies." Do you know what harpies are? Harpies are make-believe animals—birds with women's heads. The Madonna in Andrea's picture is standing on a block or pedestal which is decorated with two little harpies. That's why we call it "The Madonna of the Harpies."

The Madonna in this picture is supposed to look like Andrea's wife. He painted her likeness in almost all his pictures, but when poor Andrea finally caught the plague and became very ill, his selfish wife was so afraid of catching the disease herself that she left him alone and uncared for till he died.

Andrea del Sarto was named for his father's trade. Now we come



DETAIL OF THE MADONNA OF THE
HARPIES
DEL SARTO

to a painter who was named for his home town. You remember Perugino, who was named for the town where he lived? Well, not a great distance from Perugia is the town of Correggio (Co-red'jo) where there lived a painter known everywhere by the name of *his* town. We don't know much about Correggio's life, but we can admire his pictures. Like Andrea del Sarto, Correggio painted both in fresco and in oils. All his frescoes are in the city of Parma, in Italy, where he worked on the cathedral and the churches.

The cathedral in Parma has a round tower on top called a cupola, and Correggio painted a picture for the inside of the cupola. The picture was circular so it would fit into the ceiling of the cupola. As it could be looked at only from the floor below, Correggio decided to make the angels and other figures in the picture look like real figures

flying through the air and seen from underneath. If you should look straight up and see an angel flying above your head you would see the soles of the angel's feet nearer to you than his head. You would see



Courtesy of the Metropolitan Museum of Art

THE MYSTIC MARRIAGE OF ST. CATHERINE

CORREGGIO

just the opposite view if you looked down on the top of some one's head.

To paint a figure seen from below was something that very few artists knew how to do. Correggio first had a sculptor make some models in clay so he would know how people would look in these strange positions. The way he painted them we call foreshortening.

Correggio did other foreshortened cupola pictures. People who saw them didn't quite know what to make of them. It was such a new way of painting that at first it wasn't liked very much. One man said such

a painting looked like a hash of frogs. But the painter Titian came to Parma and when he saw Correggio's cupola picture in the cathedral he said, "Turn the cupola upside down and fill it with gold and even that will not be the picture's money worth."

Correggio's oil paintings are noted for their wonderful light and shade. He was what we call a master of light and shade. The people in his paintings are graceful, smiling, pretty, and happy-looking, and so almost everybody likes them. The main fault people find with them is that they do not seem to *mean* very much. Correggio was not a great thinker like Michelangelo and Leonardo da Vinci.

Another one of Correggio's paintings is called "The Mystic Marriage of Saint Catherine." Saint Catherine dreamed she was being married to the baby Christ and this picture shows the Baby playing with the wedding-ring that Saint Catherine had seen in her dream.

Just as famous as this painting is one called "Holy Night" or "The Adoration of the Shepherds." It shows the Baby in His manger with His mother and the shepherds around Him. A wonderful glow of light comes from the manger where the Baby lies, and lights up the faces of those who worship Him.

A strange story is told of Correggio's death, but whether it is true or not we do not know for sure. According to this story, Correggio was paid for one of his paintings all in bronze coins. You know that if you pay in pennies for something expensive, it takes lots of pennies. And this payment to Correggio took so many bronze coins that it made a very heavy load. Correggio started out to carry this load of coins home. It was a hot day and the heavy load made Correggio so hot and tired that he became ill, had to go to bed and soon died. And that was the end of this master of light and shade, but his paintings have lived on after him to give pleasure to all who see them.

CHAPTER 16

FLEMINGS

DO YOU know what a Fleming is? It isn't some strange animal you can see in the zoo. In fact, a Fleming isn't any stranger than you are, yourself, for a Fleming is a Flemish person—a person of Flanders. The strange thing about a Fleming is that he is also bound to be either a Frenchman or a Belgian or a Dutchman, as well as just a Fleming, for Flanders is now partly in France, partly in Belgium, and partly in Holland.

An interesting thing about the Flemings is that they had great artists who were painting at the same time as the early Renaissance, or Born Again, artists in Italy. There weren't quite so many great artists in Flanders as in Italy at that time, but there were many more there than in any other country. If you want to look up this country of Flanders on the map, look for Belgium. You will find it along the North Sea.

The first of the famous Flemish artists were two brothers named Van Eyck (Van Ike). Hubert was the older brother and Jan the younger. They worked in the city of Bruges, which is not a very important city now but then was one of the largest and richest cities in Europe. For a church in Ghent these two brothers painted a magnificent altar-piece. An altar-piece was not like an ordinary picture. An altar-piece had a central panel with wings or shutters on each side, like a threefold screen. These shutters could be closed like the shutters of a window and so the Van Eycks painted pictures on the back as well as on the front.

Hubert was the one who planned the paintings on this altar-piece, but before he had finished them all he died, and then Jan completed the work. The altar-piece was so much admired that several cities wanted it for their museums. So it was taken apart and for a long time the central part was in one city and each of the shutters in another. After the World War the pieces were brought back to Ghent, to make a complete altar-piece again.

The altar-piece is almost all we have to show us how good an artist Hubert Van Eyck was, but Jan's paintings have been better preserved and there are several very famous ones in museums. Both the Van Eycks painted with oil, and they used oil so well to bring out the colors and to keep the paintings fresh-looking that the story soon grew up that they were the inventors of oil paintings. This isn't exactly true, but they did improve oil painting so much that we can call them the fathers of oil painting. From them the Italians learned to paint with oil.

The Van Eyck brothers were followed by other good painters in Flanders, but I'm going to have to skip them and tell you about the greatest Flemish artist, who lived two hundred years later than the Van Eycks. So that you'll know the time this was, I'll tell you that he lived from 1577 to 1640. His name was Peter Paul Rubens.

Peter Paul must have been a very bright boy, for he learned to speak Latin, French, Italian, Spanish, English, German, and Dutch! Do you know anybody who can speak seven languages? .

As a young man Peter Paul worked for several years in Italy, for one of the dukes there. The duke liked his work so much that he would not give Rubens permission to leave. One day, however, Rubens had a message from Flanders telling him his mother was very ill. He started for home at once without waiting to get the duke's permission. .

The rulers of Flanders were glad Rubens had come back and they not only gave him orders for pictures but made good use of him in other ways. He was entrusted with important missions to carry out in

Spain, in France, and in England. Every place he went he won friends. The King of Spain made him a knight. The King of England made him a knight. Honors were heaped upon him. He continued to paint hundreds of pictures. In his house was a huge studio, where he had many young artists helping him as they themselves learned from him. He liked to paint big pictures best and the stairway of his studio was made very large so that his largest paintings could be taken from the studio after they were painted.

Rubens is noted for the rich, bright colors of his paintings. He could paint all kinds of pictures—portraits and landscapes, animals and battles, religious pictures and pictures of mythology and history. Some are so full of action they make you excited just to look at them. "The Lion Hunt" is one of the exciting ones. It shows men on horseback with spears, attacking lions, and the picture quickly shows you hunting lions is not a sport for weaklings. Rubens learned to draw lions by hiring a real live lion for a model.

Like most painters of his time, Rubens didn't mind painting people of the past in the same kind of clothes as people wore in his day in Flanders. No one then seemed to think it was peculiar to see a painting of an ancient Greek in the costume of the Flemings of the seventeenth century, but painters nowadays always try to have their figures wear clothes that would have been worn at the time the figures were supposed to have lived.

Many people consider Rubens's masterpiece to be "The Descent from the Cross." It shows Christ's followers removing His dead body from the cross on which He died. It is in the cathedral at Antwerp, in Belgium.

A picture every one likes is the painting Rubens did of his two sons. The older boy was eleven and the younger boy seven when Rubens painted their portraits. They look very lifelike, don't they? Indeed they look very much like boys of to-day except that their clothes are

not the kind boys wear now even when they are dressed up to go to a party, or to have *their* pictures taken.

Rubens was just the opposite from lazy. He worked hard and fast,



RUBENS'S SONS

RUBENS

but even then he had orders for more pictures than he could do. Sometimes he let his pupils paint parts of his pictures, to save time and also to give them practice. He was always ready to help other artists and sometimes bought their pictures only because they needed money. He

even bought some of the paintings of a certain artist who had been very unfriendly to him, just because he felt sorry for him.

Rubens taught so many young men in his studio that some could hardly help becoming famous painters too. The best painter of all who studied under Rubens was Anthony Van Dyck (Van Dike). He went to England to live and painted there for the king, who knighted him for his work. Sir Anthony Van Dyck is most noted for his portraits of kings and noblemen and their families, but he also painted many good religious pictures. Here is Van Dyck's painting of the Children of Charles I of England.

Sir Anthony Van Dyck became so famous at painting portraits of



CHILDREN OF CHARLES I

VAN DYCK

noblemen who almost all wore small pointed beards that even now we call a pointed beard a Van Dyck beard.

Most of the hands in Van Dyck's portraits are long and slender, and it is said he copied his own long and slender hands for his pictures.

I wish I had room to tell you of other Flemish painters. With only this one chapter about them you may think Flemings are not so important in the story of painting as they really are. But I must tell you the last names of three Flemish painters who came between the time of the Van Eycks and of Rubens. They were a father and two sons and so all three have the same last name. The name is Breughel (Brew'gal). If you can get your teacher or your mother or the librarian to show you some pictures by the Breughels, I'm pretty sure you'll like them. I won't tell you why, but look them up and see if you don't. I *will* tell you that the Breughels' paintings are not at all like the Italian pictures.

And now I've really told you of more Flemings than I expected to. Here they are:

| | |
|-------|-----------|
| 2 | Van Eycks |
| 3 | Breughels |
| 1 | Rubens |
| 1 | Van Dyck |
| <hr/> | |
| 7 | Flemings |

CHAPTER 17

TWO DUTCHMEN

NEXT door to Flanders on the shore of the North Sea is the country called the Netherlands—the country of wooden shoes and windmills, of tulips and hyacinths, of the *Zuider Zee*, of canals and dikes. Often people speak of the Netherlands as Holland, but that is not quite correct because Holland is just a part of the country. The people of the Netherlands we generally call Dutch.

The Dutch, like the Italians and the Flemish, had a Renaissance too. The Dutch Born Again time was later in coming than the Italian and the Flemish, but when it did come it produced some of the very best artists of the world.

The Dutch artists painted pictures that were different from those of the Italians and the Flemish. The Dutch religion had become a Protestant religion instead of Roman Catholic, and the Dutch did not believe in decorating their churches as much as the Catholics did. And so the Dutch artists painted very few religious pictures, few Madonnas and Holy Families. Instead they painted portraits and landscapes and pictures of the everyday people and things they saw around them.

Their pictures differed in other ways too. In the older paintings, in Italy and Flanders, for instance, most of the people in the pictures had the natural expression on their faces that they usually wore. You can think of one of these artists saying to some one who was having his portrait painted, "Now just sit still and don't move, and I'll paint your portrait." But some of the Dutch artists had a different idea of portrait painting. A Dutchman named Frans Hals painted portraits

of people who you know were not told to sit still and look natural. The expression on the faces of Frans Hals's portraits is what we call a fleeting expression. He caught a smile, or a grin, or a scowl—expressions that last only a second or two—and he made his pictures look as though in another second the expression would change.

Some pictures by Frans Hals were different in still another way. They showed the strokes of the paint brush not smoothed out, but left in the paint, as if the artist wanted you to see that he had painted the portrait quickly and caught the fleeting expression on the face with a few quick strokes of his brush. Not all his pictures are like this. Some are just as smoothly and carefully finished as can be. A portrait called "The Laughing Cavalier" is one of his most famous pictures and it shows the lace on the man's cuffs done very carefully—and lace is not an easy material to paint in a picture. "The Laughing Cavalier" really isn't laughing. He seems to have a self-satisfied smile, instead of a laugh, on his lips.

Another picture by Hals will show you the quick brush-stroke work that he could do so well. It is called "Hille Bobbe" and shows a woman and her parrot. The parrot looks a good deal like an owl and the old woman isn't a bit pleasant-looking. Sometimes the picture is even called "The Witch of Haarlem." Haarlem was the Dutch city where Hals lived.

Now, at the time Frans Hals lived and painted, the Netherlands had recently become a free and independent country. To make sure that they would be strong enough to keep this freedom from other countries the Dutch had bands of citizens who were trained to act as companies of soldiers in case of need. Gunpowder and guns were still so new that some of these companies still called themselves *archers* or crossbowmen. The officers of each company generally had their portraits painted all in one picture and Hals painted several group portraits of the archers and other companies. He is generally spoken of as the greatest of all Dutch portrait painters except Rembrandt.



Courtesy of The University Prints

HILLE BOBBE

HALS

This master, Rembrandt, did most of his work in the city of Amsterdam. He did not do portraits only. He painted almost every kind of subject an artist could paint. Rembrandt created a light in his pictures that was unlike real daylight or lamplight but which makes his pictures marvels of brilliant light and deepest shadow. For years he worked hard, lived happily, and earned money and fame. But he spent so much money in collecting beautiful things he liked that he finally owed more than he could pay. His pictures became unpopular, too, and so he found it hard to make money in his old age.

You wouldn't think, would you, that a picture that is now considered one of the great pictures of the world would be laughed at and disliked, and would make the painter unpopular when it was painted? But that is what happened when Rembrandt painted his "Night Watch." "The Night Watch" was ordered by one of the companies

of men who acted as guards for the city in time of danger. It was to hang in their club house and each member of the guard was to pay his share for having the picture painted.

Rembrandt wanted to show the stir and excitement as the guards marched out, and he painted the picture with the captain and his lieutenant in the front and the members of the guard hurrying out behind them with guns and spears. Children are there to watch the show, and even a dog appears in the picture. The light is very bright on some of the figures and the rest are in the darkness of night. And



Courtesy of The University Prints

THE NIGHT WATCH

REMBRANDT

yet the light is so different from ordinary light that some think the picture is a daytime scene and should not be called "The Night Watch."

Now, when the members of the guard saw the picture, they did not like it.

"We paid to have our portraits painted," they said "and here the artist has stuck us in the background where it is so dark we can hardly even be recognized."

Other Dutchmen laughed at the picture. "We can't tell whether it represents night or day," they said. And from that time on Rembrandt sold fewer and fewer pictures.

Wouldn't you like me to show you a list starting with the very best artist in the whole world and then giving the second best and then the third, and so on down to the twentieth or fiftieth or hundredth best artist? Well, I'm not going to show you any such list, not because I don't want to, but because no one in the world can make such a list. If I did, it would be only my private opinion. It wouldn't be the best artist and the next best and so on, but the artist *I* think is best and the one *I* think is next best. And just because I think he's best doesn't mean he *is* best. No one artist is so much greater than all other artists that every one can say, "He is undoubtedly the best."

But if all the men who know most about such things made their own private lists of the best, I'm pretty sure all the lists would have Rembrandt somewhere near the top.

So remember how great an artist people think Rembrandt was and if you ever in your whole life get a chance to see one of his real pictures—not just a copy in a book—be sure to look at it long and thoughtfully. Then see where he would come on *your* list of great artists.

CHAPTER 18

Û AND JR.

“**D**ON’T forget to dot your *i*’s. Be sure to cross your *t*’s.” Has your teacher ever said that to you? I always used to have a hard time remembering to dot all the *i*’s when I wrote compositions at school. But suppose I had gone to school in Germany. *There* the school children have to be careful about dotting *u*’s as well as *i*’s! For in Germany there are two kinds of *u*—a plain *u* like ours, and a *u* with two dots on it like this, *ü*. A *u* with two dots is sounded something like our *u* in *pure*.

I wanted to tell you about the dotted *u* right at the beginning of this chapter because if I didn’t I know you would ask what the two dots are for when you see them on the name of the German artist Albrecht Dürer. His name, you notice, is not Durer but Dürer. He lived and painted at the same time as Titian, Tintoretto, Michelangelo, and Leonardo da Vinci. In fact, he knew some of the great Italian artists personally, for he took a trip to Venice and stayed there for some time. Germany was having a Born Again time as well as Italy and Flanders and later the Netherlands, and Albrecht Dürer was the great artist of the German Renaissance.

Dürer didn’t paint much like the Italians. He painted many kinds of pictures, but his portraits are more famous than his other paintings. And besides paintings, Dürer made engravings. To make an engraving the artist cuts the lines of a picture in wood or copper. Then he puts ink in the lines and presses the wood or copper on a piece of paper. The picture that is printed this way is an engraving.

Dürer made many engravings and he is one painter who is as celebrated for his engravings as for his paintings. Some of his engravings—the one called “Melancholy,” for instance—are as well-known all over the world as his best paintings.

Dürer's woodcuts also are rightly famous. A woodcut is just the opposite from an engraving. The lines are drawn on the wood and then the wood is cut away from the lines, so that the lines are left raised. Then the raised lines are inked and pressed on the paper.

When Dürer made the trip to Venice that I mentioned, he was welcomed and honored by the Venetians as a famous man. The Venetian artist Bellini, who was then an old man, asked Dürer one day if he would give him one of the special brushes he used to paint the hair in his portraits. Dürer said, “Certainly,” and gave Bellini the brush he was using.

“Why,” said Bellini, “this is just an ordinary brush. Do you really paint those wonderful hairs with a brush like this?” Then Dürer took the brush and with it painted some hairs as only he could paint them.

Dürer admired the works of the Italian painters, but when he returned to Germany he continued to paint in his own way, without trying to make his pictures have an Italian look.

Albrecht Dürer painted several portraits of himself. He was able to do this, of course, by looking in a mirror and painting what he saw in the glass. From these self-portraits we know he was a very handsome man. Several of the other portraits he painted are equally famous. I think you'll like the one of his father on the opposite page.

Dürer was apt to put a great deal of detail into his pictures. He filled the paintings with all kinds of odds and ends, and every tiny button is painted as carefully as if it were as important as the person's face. Most of the German artists did this and in most of their pictures so much detail is a drawback. Your eye is drawn from the important things to the unimportant ones. But although Dürer often had just as much detail as other German painters, he was a great enough artist

to keep the little things in the picture from becoming too important.
The second great Renaissance artist of Germany also was a portrait

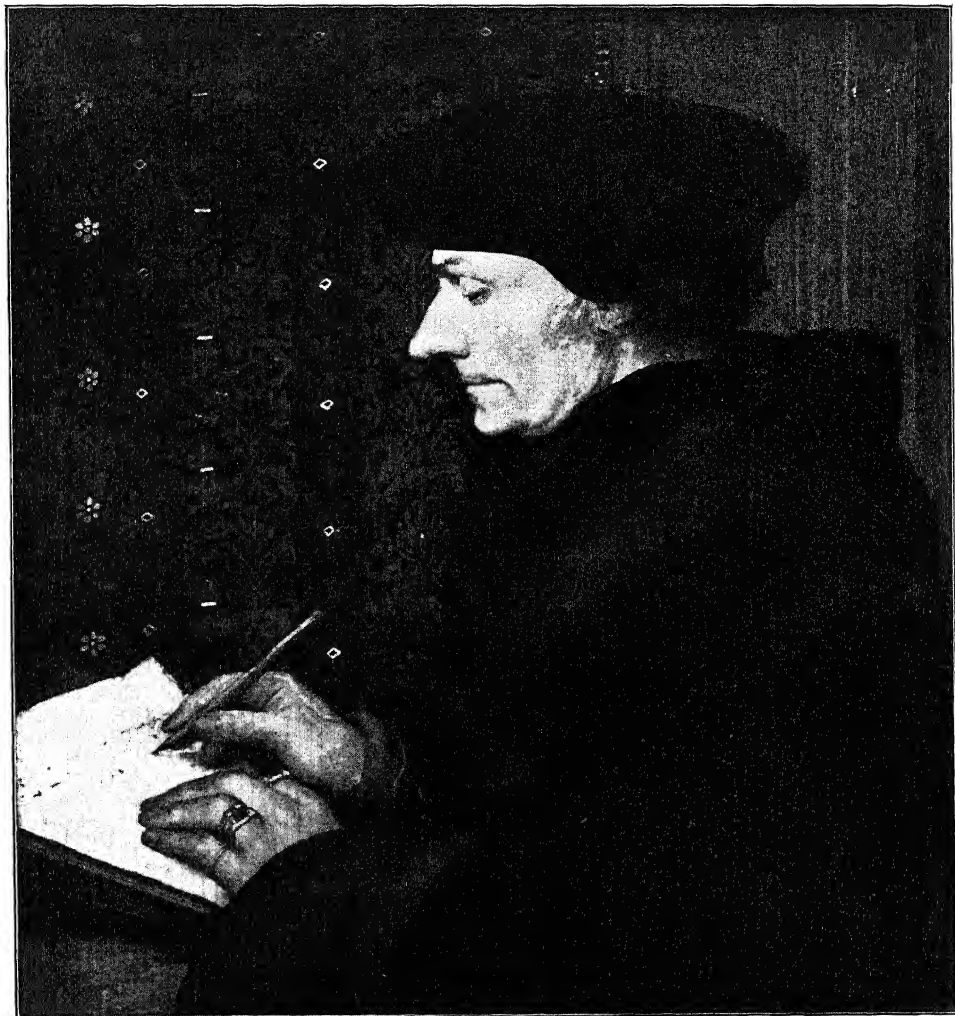


DÜRER'S FATHER

DÜRER

painter and a maker of woodcuts. His name was Hans Holbein (Hole'-bine) and we have to speak of him as Hans Holbein the Younger because his father was also an artist named Hans Holbein. If Holbein the Younger were alive now he would write his name "Hans Holbein, Jr."

The Holbeins moved to Switzerland, the country of the Alps, and Hans Holbein the Younger became the friend of a very famous man who lived there—Erasmus. Erasmus was a great thinker and wrote



ERASMUS

HOLBEIN THE YOUNGER

learned books. Holbein painted five portraits of Erasmus. The one most people prefer is the one shown on the opposite page.

It shows a side view of Erasmus. A side view of some one is called a profile. Erasmus sits writing at his desk. There do not seem to be very many details in this portrait, but in another famous portrait by Holbein, called "Portrait of Georg Gisze," there are about twenty-five articles beside Georg Gisze himself. And yet, like Dürer, Holbein was able to keep them in their place so that after all Georg is the chief thing your eye looks at. Indeed, he left the unimportant details out of the faces of his portraits, putting in only the lines that would tell most.

Holbein found his business of painting was not doing so well in Switzerland, so he decided to take a bold step. He would go to England and see what work he could get there. He got a letter of introduction from Erasmus and went. The English liked his work and he painted portraits of most of the important Englishmen of the time including the king, Henry VIII.

The portraits by Hans Holbein are usually liked by boys and girls better than those by any other painter, except perhaps Frans Hals. And that is true for a great many grown-ups too. So I'm pretty sure you will like them yourself and that you would enjoy a picture book of portraits by this master portrait painter.

But don't forget Dürer. You'll like his pictures too.

Albrecht Dürer
Hans Holbein the Younger

I wonder which you are going to like the better.

CHAPTER 19

FORGOTTEN AND DISCOVERED

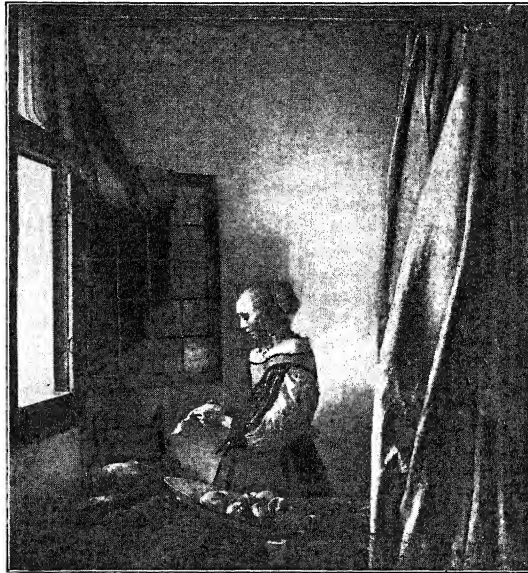
ALL any one knows about the life of one of the very great painters of the world can be written in a few sentences. Most great painters have had whole books written about their lives, but there isn't enough really known about the life of the Dutchman Jan Vermeer (Ver-mair') of Delft to make even a few pages. Here is almost all we know about him:

Jan Vermeer was born in Delft in 1632 and died there in 1675, leaving a widow and eight children. There it is in one sentence—the life of Vermeer of Delft. Nobody even knows how many pictures there are that he painted, for some pictures we think he painted may have been painted by some one else.

But the pictures that we are sure were painted by him are considered very wonderful. Most of these are of indoor scenes. Only one, as far as we know, is a landscape. Most of these paintings show a woman doing some very usual thing, like reading a letter or sewing or playing the clavichord or sometimes just looking out of the window. Perhaps his wife or one of his daughters posed for Vermeer's pictures. In some pictures there are two women and in a few there are men. In most cases the person in the picture is shown near a window.

The wonderful way Vermeer could paint light coming into a room through a window is one of the first things people notice about these paintings. Next, one notices how well Vermeer could show what material a thing is made of—its texture. The lace cuff, the silk dress, the wooden chair, the silver pitcher, the ripe fruit, the shiny drinking

glass, the pearl necklace, the blue china plate, are done so well that no one could doubt what each is made of. One could almost tell how each object feels to the touch. And over all streams the daylight from the window, binding the parts of the picture together. Some people say it is the finest daylight that any painter has ever put into an indoor scene. Certainly Vermeer was able to paint as few men could.



Courtesy of The University Prints
THE LETTER

VERMEER

Here is one of Vermeer's pictures. It is called "The Letter." It is merely a woman reading a letter by a window, but it is painted so well that it has become famous.

Vermeer did not seem to have any imagination. He painted only what he saw. He never, for instance, made his women prettier than

they really were. I don't believe he could have painted a dragon, or Saint George either, without looking at a real dragon (as if there were such a thing!) or at Saint George himself.

Why is so little known about so fine a painter? It seems mysterious, doesn't it? Vermeer's pictures were liked at the time they were painted, but then for some reason they were almost forgotten for about two hundred years. No one took the trouble to write down anything about the artist. Then his pictures were "discovered" again and became so valuable that it took a great deal of money to buy one. Most of Vermeer's paintings are now kept very carefully in museums.

This chapter is far too short for so important a painter. But there aren't any stories to tell about him unless I just make them up. Vermeer didn't use his imagination in painting his pictures, and I'm not going to use mine in telling you made-up stories. We'll just have to let Vermeer's pictures speak for him.

CHAPTER 20

SPEAKING OF SPANIARDS

THIS chapter is about Spain. But I'm going to begin by telling you about Crete, which hasn't anything at all to do with Spain. Crete is an island south of Greece. It belongs to Greece and the people of Crete speak the Greek language. Sometime about the middle of the fifteen hundreds (nobody knows just when) there was born in Crete a baby who was to become a celebrated painter. You have never heard of his name and couldn't pronounce it if you had. I'll tell it to you just to show you, but don't try to remember it, for this painter is never spoken of except by his nickname. Here is his real name—Domenico Theotocopuli.

He was a mysterious kind of man and no one knows very much about his life. He seems to have left Crete and gone to Venice to study art under the great Titian. The next we hear of him he has bobbed up in Spain and settled in the city of Toledo. In Spain he remained and in Spain he died in 1614, but he always thought of himself as a Greek rather than a Spaniard, and he signed his most important paintings in Greek letters. The Spaniards could hardly be expected to call him Domenico Theotocopuli any more than you are expected to. They just called him "that Greek fellow" or "the Greek," which in Spanish is El Greco (El Gray'ko).

El Greco painted pictures that are so different from other artists' paintings that you may think they are not beautiful when you first see them. All his people are too long and thin to be like real people, and the colors are used differently from the colors in most paintings.

When you see a picture by El Greco you must remember that he is not trying to make you see a picture of things as they would look in a photograph. His paintings of men and scenes represent the spirit (or the idea), which is a different thing from what you would see with your eyes if you looked at real men and scenes. This is hard for many people to understand. They think a painting should always show you exactly what the real things look like. But a camera can do *that* just as well as an artist, and so many artists sometimes paint, like El Greco, not what they see but what they think will look best as a picture.

When El Greco died the man who was to become the greatest Spanish painter of all was still only a boy of fourteen. It seems strange to us that he is called by his mother's name instead of by his father's. It was just an old Spanish custom. I don't expect you to remember this painter's entire name, because it was Diego Rodriguez de Silva y Velasquez. What you have to remember is the Velasquez part, for that is what he was called. Velasquez (Vay-las'keth) was born in the city of Seville in 1599, the very same year that Van Dyck was born in Holland.

When Velasquez had grown up and had painted for some time he decided to go to the capital of Spain, Madrid. The king saw some of his work and liked it, and so the next year Velasquez was sent for and moved to Madrid for good. There he became the king's painter. We know very well what this king of Spain looked like, because Velasquez painted many pictures of him. That was one of the duties of the king's painter. The king was Philip IV. The first thing you notice about Philip is his very large mustaches which curl up to his eyes. They must have been a nuisance, those mustaches, for Philip had to put leather cases on them at night to keep them shaped right. I wonder what the king looked like when he got his fancy mustaches caught in the rain!

Almost all the portraits of the king and his nobles show a wide stiff

white collar that sticks out from around each man's neck. King Philip was very proud of this kind of collar, and for a very special reason—he invented it himself! He was so proud of his new invention that he had a great celebration after which there was a solemn procession or parade to church to thank God for such a blessing.



THE PRINCESS MARGUERITE

VELASQUEZ

Here is a portrait of a little girl that Velasquez painted, the Princess Marguerite. She was a daughter of King Philip.

Velasquez was very different from El Greco in his painting. El Greco painted things as he wanted them to look, to give his idea of them. El Greco used his imagination instead of putting down on canvas just what he saw with his *eyes*. But Velasquez painted objects to look

like the real objects. We call a painter who does this a realist, because he paints only what he really sees.

When Rubens came to Madrid, the king asked Velasquez to show him the art treasures of Spain. Rubens and Velasquez got along to-

gether very well. Rubens admired Velasquez's paintings and Velasquez admired the work of Rubens.

Velasquez wanted to see the famous paintings of the great Italian artists and so he got permission from the king to make trips to Italy, where he made copies of some of the paintings of Tintoretto, Michelangelo, and Titian.

And here is a picture of your old friend Æsop, who wrote the fable of the Fox and the Grapes, the Dog in the Manger, and other famous fables.

Of course the picture is not of the real Æsop. Velasquez just painted the picture as he thought Æsop might have looked, for Æsop himself lived two thousand years before Velasquez.

Velasquez has been called the painters' painter, because so many

painters have admired and praised his work. He was the greatest of the Spanish painters, greater than El Greco and greater than the next Spanish painter I'm going to tell you about, whose name was



ÆSOP

VELASQUEZ

Murillo (Moo-reel'yo). Murillo, like Velasquez, was born in Seville. He went to Madrid, where Velasquez encouraged him in his painting and got him permission to study the paintings in the king's picture gallery. After two years there, Murillo went back to live in Seville. He was still poor and unknown.

Now, about that time the Franciscan friars, or monks, in Seville were looking for an artist who would decorate one of their buildings with paintings. They wanted to get some famous artist, but they had too little money to pay a famous artist's prices. So they decided to let Murillo do the work. Murillo painted eleven pictures for the friars and every one liked them so much that he was asked to do more pictures than he could possibly paint.

Then Murillo painted eleven pictures for another building. These were even better than the first eleven, and made him famous.

Another picture that Murillo painted has a story told about it that shows how lifelike it is. The picture is of a priest with a spaniel at his feet, and the story is that when a live dog saw the painted spaniel he thought it was a real spaniel and growled at it. It reminds us of the story of the birds who pecked the grapes in Zeuxis's picture. I don't believe it can be a true story because a dog can't be fooled by a picture the way he can by a mirror.

Murillo was very good at painting babies and Madonnas. His Madonnas generally have dark hair and eyes. On the next page is a picture that all children seem to like. It shows the baby Christ and little Saint John getting a drink of water out of a sea-shell. The little lamb in the corner of the picture looks as if he were thirsty and wanted a drink, too.

Murillo was so successful at selling his pictures that he made a large fortune, but he was a very generous man and gave much money to the poor. He had once been poor himself, and he knew how much they needed help.

One day when he was old he was getting up on a scaffolding to paint the higher parts of a large picture, when he stumbled and fell. He was so badly hurt that he never got well and the picture was left unfinished.

The people of Seville never forgot their famous painter and even to-day in Seville they call any beautiful picture a "Murillo."



Courtesy of The University Prints

THE CHILDREN OF THE SHELL

MURILLO

CHAPTER 21

LANDSCAPES AND SIGN-BOARDS

FIRE-*ESCAPES* are part of the scenery in a city. *Landscapes* are the scenery in the country. Fire-escapes have nothing to do with painting. Landscapes have a great deal to do with painting. But once upon a time landscapes had as little connection with painting as fire-escapes have now.

It seems strange that from the time the cave men made their animal pictures, thousands of years ago, all the way up to the middle of the seventeenth century, almost no one in Europe painted a real landscape. Italy had great painters during the Renaissance. Italy had beautiful landscapes. But strange to say the great painters never thought of painting the beautiful landscapes. If there was any country scenery at all in the Italian pictures, it was always as a mere background for the figures in the foreground.

The Van Eycks in Flanders had come near to real landscapes in their famous altar-piece. But the things happening in their picture were more important than the scenery.

Some landscapes had been painted in Germany about 1500, but they didn't attract much notice.

It seems strange that the first two painters of Italian landscapes were not Italians but Frenchmen. One was named Nicolas Poussin (Poo-sanh). He was interested in the stories of the ancient Greeks and in the old Roman ruins. His pictures generally have Greeks in the foreground, but the backgrounds are true landscapes. The next picture will show you the Greeks. It is called "Shepherds of Arcadia."



SHEPHERDS OF ARCADIA

POUSSIN

Do you know where Arcadia is? Arcadia used to be a country of ancient Greece noted for its kind, happy, simple country people and shepherds. These shepherds that Poussin painted seem to be talking about the marble tomb in the picture. One is pointing to some words on the tomb. The words can't be read here, but in the real picture they mean, "I too have been in Arcadia."

The other French artist who painted landscapes in Italy is known as Claude Lorrain. His real name was Claude Something Else, but as he came from Lorraine, in France, he is always called Claude Lorrain. The story goes that he was once a pastry cook and later the servant of a painter in Italy. One of his duties was to clean the paint brushes of his master. This interested him in painting. His master gave him some lessons and soon Claude Lorrain was a painter himself.

Claude Lorrain had people in his pictures, but generally they were small and unimportant. The landscape was the important thing, even

more important than it had been with Poussin. So Claude Lorrain is sometimes called the father of landscape painting. He liked to paint pictures of the sea even more than landscapes, so we might call him a seascape painter too.

The next important French painter lived about a hundred years later than Poussin and Claude Lorrain. His name was Watteau (Wah-toe). One of his paintings was on wood and was painted as a sign-board for a hat shop. Poor Watteau led a miserable life. In the beginning he was very poor. When he came to Paris to paint he worked hard, but he was paid so little he almost starved. At last, when he had become well-known as a painter and was making enough money to live comfortably, he was always so ill that he could not enjoy himself much, and finally he died of the disease that had made him ill.

Now, I'm telling you about the sad things of Watteau's life for this reason: The pictures he painted are just the opposite from sad. The people in them are just the opposite of the kind of person Watteau was.

Instead of painting poor people, he painted young men and women clothed in silks and satins.

Instead of painting hard-working people like himself, he painted only people having a good time—dancing, picnicking, playing at garden parties, making love.

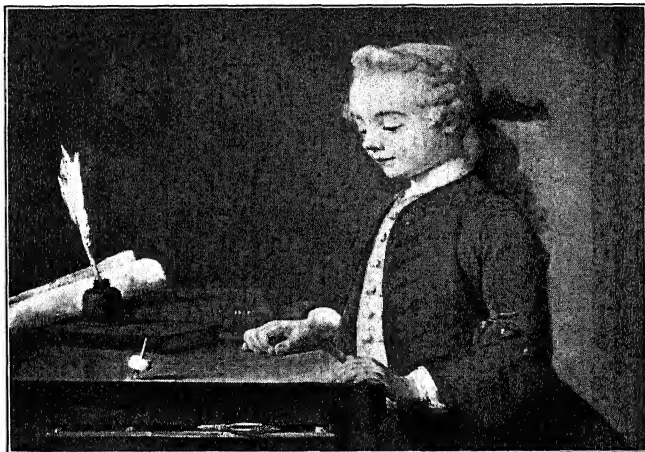
Instead of painting ugly, crude people like himself, he painted people who are almost too graceful and pretty and polite. No one could be quite so free from worries and cares as Watteau's people are.

Chardin (Shar-danh) was another French painter who was born only a little later than Watteau. He too painted a sign-board. Perhaps he got the idea from Watteau, but Chardin's sign was for a surgeon's office instead of for a hat shop. It showed a crowd of people in a street looking on while a surgeon binds up the wound of a man hurt in a sword fight.

Chardin liked to paint still life. Still life means a picture of any-

thing without life such as fruits, dead fish, basins, cut flowers, dead rabbits or pheasants and other game, pots, pans, and so on. He was also a portrait painter. But the third kind of painting that Chardin liked to do is the kind he is best known for—scenes of people inside their houses, doing the everyday things that people do. Usually there are children in these pictures. One painting shows a mother teaching her little girls to say grace before meals, another shows a little boy spinning a top on a table, another shows a mother telling her son to be careful of his new hat when he goes out.

Though the people in Chardin's time dressed differently from us, still we can say when we see his paintings, "Those look like real everyday people." We feel he didn't try to show us something astonishing or exciting, but just ordinary scenes in ordinary French families.



Courtesy of The University Prints

BOY WITH A TOP

CHARDIN

CHAPTER 22

STIRRING TIMES

IT WAS the year 1793. The French Revolution had overthrown the government of the King of France. The common people had stood hardships and injustice until they could stand them no longer. Then they had *struck*. France had been made a republic. The heads of hundreds of people—enemies of the republic—were being cut off. The king and his family had been put in prison. It was voted that they too should lose their heads.

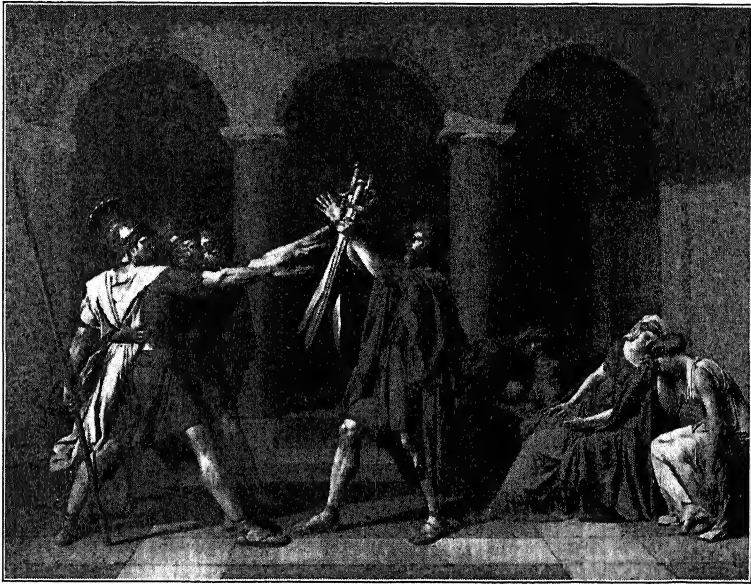
One of the men who voted yes to the question "Shall the king be killed?" was Jacques Louis David (Dah-veed). David was a painter. He believed the revolution was right, even though he had been one of the court painters. By court painter we mean the king's own painter.

Some of the revolutionists had read about the old Roman republic that you have read about in your history books. They liked to think of themselves as strong and brave like the ancient Romans. They liked to think of their republic as like the old Roman republic. So it became the fashion in the revolution to imitate the old Roman heroes. David got the actors in the theaters to wear Roman costumes instead of French clothes. Soon other people were trying to dress like the Romans. They even made their furniture in imitation of Roman furniture. David found that the people wanted Roman pictures, so he painted many pictures of scenes from Roman history.

Nowadays we think that David's paintings are not so wonderful as the revolutionists thought them. But they are important because they

set a style in painting. The old Roman and Greek days are known as the classical times, and so this style that David made so popular is called the Classical style of art. And David and the other Classical style artists said that no other kind of painting was worth doing. They made many rules for painting that they expected all good artists to follow.

David had begun painting pictures of the Romans even before the revolution. One of these paintings is called "The Oath of the Horatii." If you have read your Roman history carefully you will remember



Courtesy of The University Prints

THE OATH OF THE HORATII

DAVID

that the Horatii were three brothers who were champion fighters. Rome was at war with another city. Instead of letting the two armies fight, which would have meant the death of many men, each side agreed to pick three fighters and let them fight it out to see which city should

win the war. The Romans chose the three brothers, who took a solemn oath to win for Rome or die trying. David's picture shows them taking this oath.

When the fight was ended, two of the brothers had been killed. But the third one had managed to kill the other three fighters and so to win the war for Rome.

Another famous Roman picture by David shows the women stopping the fight between the Romans and the Sabines by running out between the two battle lines. You will find this picture is used to illustrate many Roman history books.

David was also a portrait painter. He painted a portrait of a French lady, Madame Récamier, who is shown lying on a couch. The couch is Roman in style and the lady's dress shows the Roman styles that French women wore then.

After the revolution came Napoleon. Napoleon made himself Emperor of France. David admired Napoleon greatly and painted several pictures of him. He painted him on a rearing horse, crossing the Alps. He painted him being crowned emperor. (Napoleon crowned himself.) He painted him on the battle-field.

But after Napoleon, there came another king—of the same family as the poor king who had lost his head. Naturally, David wasn't court painter to *him*—not after having voted for the other king's death! In fact, David had to run away from France, and he lived in Brussels for the rest of his life.

But the strict rules of the Classical style of art lived on. David had had many pupils and some of them became famous painters, too. One of these pupils was the artist Ingres (Angr). Ingres was a wonderful draftsman. That means the lines that he drew were beautifully done. He thought more about the lines in a picture than the color or the light. All Classical painters tried to make the lines and shapes in their pictures more important than the colors. So their colors are dull and lifeless. Ingres is probably best known for his portraits. And the

portraits that he drew in pencil and did not paint at all show how great a draftsman he was.

Baron Gros (Grow) was another pupil of David, and it was too bad that he was, for the Classical pictures he painted, as much as possible following David's strict rules, were not so successful as those he painted in another style. Gros kept trying to paint great Classical pictures and was broken-hearted when he found he couldn't do them well. His really fine pictures he thought little of, because they were not about Greeks and Romans. These others are interesting to us because they pictured the events that were taking place then, which Gros painted well because he had seen them.

Napoleon thought it would be a good idea to have a painter with his army. So he made Gros Inspector of Reviews in the army so that the painter could go with the troops and paint the battles. Gros watched the fighting himself, and so he did not paint war as a glorious thing. He showed the heroism of the soldiers, but he showed their terrible suffering too.

Now we come to a French painter who did not believe at all in Classical painting. The strict rules that the Classical painters said all artists should follow made this artist angry. He was Delacroix (Della-crowah). Delacroix led a revolt against the Classical style of painting. Painters who thought as Delacroix did were called Romanticists. The Romanticists didn't see any sense in painting Greeks and Romans. They wanted to paint what was going on in the world at that time. The Romanticists revolted against the Classical style in another way. They believed in color. They thought color was more important than beautiful line drawing.

Of course the Classical painters hated the Romanticists and tried to do all they could to stop them. But Delacroix and his followers became more and more popular and finally they took the place that the Classical artists had once held.

Delacroix painted pictures of the Crusaders, of Bible stories, of the people of Algiers, of the war going on in his time between the Greeks and the Turks (he was all for the Greeks), and of many other subjects. The picture below shows a scene from the Bible. I hope you will see it some day in colors. Delacroix's drawing was not always as good as that of other artists but his coloring was very good indeed.



Courtesy of the Metropolitan Museum of Art
CHRIST IN THE BOAT

DELACROIX

One of Delacroix's paintings is called "Liberty Leading the People." It is supposed to show a scene in a new French Revolution that took place in 1830 when there was fighting between the people and the soldiers of the king in the streets of Paris. It is a stirring picture, full of action and movement. It has really a double meaning. The Classical style of painting that tried to keep all other ways of painting out of France needed to be overthrown too. And this picture may be thought of as Liberty leading Romantic art against the too-strict rules of Classical art.

CHAPTER 23

A LATE START

DO YOU know what an international picture show is? It is a group of pictures brought together from different countries so that people can see how much alike and how different the paintings are.

Let's suppose all the great countries in Europe had decided to have an international picture show in 1700 A.D. We shall have to call it a make-believe show because the various countries never thought of such a thing in those days. So let's make our own rules.

We'll say it's 1700. Each country can send only one picture and the best will get a prize.

Now let's say that all the pictures have arrived:

- A Titian from Venice
- A Michelangelo from Rome
- A Velasquez from Spain
- A Rubens from Flanders
- A Rembrandt from the Netherlands
- A Dürer from Germany
- A Poussin from France

But where is England's picture? Every important country except England has sent a famous painting. Now, England is one of the greatest countries in this year 1700, but all we get from England is a letter saying that she is very sorry but she can't send us a picture by a

famous English artist because she hasn't had any famous artists. What! One of the greatest countries in Europe—perhaps the greatest—has no painters? Well, what a disappointment that is for our show! But—

Though England had had no famous painters by 1700, she soon made up for lost time. Her first famous artist was three years old in 1700. His name was Hogarth. And after Hogarth came many more artists. If we had held our make-believe international picture show in 1800, England would have had plenty of paintings to choose from.

Hogarth began as an engraver of silver. Then he learned to engrave on copper and make prints from his copper plates. These prints were very popular and he sold enough of them to make a good living. But all the time he wanted to be a painter. So he painted pictures, but he was so well-known as a print maker that very few people considered him a great painter. They preferred his prints and engravings. He found that he could make engravings of his paintings and sell the prints much more readily than the paintings themselves. Nowadays we think of him as a great painter—the first great English painter.

Probably all boys and girls like to read the funny papers. A newspaper comic strip is generally very poorly drawn. You could hardly call it art. And yet Hogarth, in some of his paintings, used the same idea as the funny papers. He used to make a series of six or eight pictures about the same people, showing what happened to them from time to time. Only instead of being simply funny, Hogarth's pictures were meant to show how bad certain things were in England at that time. They *were* often humorous, as well. That kind of humor we call satire.

Hogarth printed one series of pictures about a man who was trying to be elected to Parliament. One picture shows the man making a speech. Another shows him hiring men with clubs to make the people vote for him, another shows him bribing voters—that is, paying them to vote for him. Each of the pictures is a good painting by itself, but the whole series was supposed to be seen together, like the different

pictures in a comic strip. And these pictures made a great impression on the Englishmen of Hogarth's time. Perhaps they did help make things better as Hogarth hoped they would. Nowadays elections are certainly run as fairly in England as anywhere in the world.

Hogarth painted portraits too. He painted a portrait of himself with his little dog. He painted this picture of "The Shrimp Girl." Nowa-



Courtesy of The University Prints

THE SHRIMP GIRL

HOGARTH

days we buy shrimps in a store or at the market, but in London in Hogarth's time people bought shrimps from girls who carried the shrimps around in a basket on their heads.

Hogarth has caught the shrimp girl's smile as Hals caught the smiles in the portraits he painted—with quick, sure strokes of the brush. If you put this painting side by side with Dürer's portrait of his

father, it looks unfinished. And yet it tells you as much about the real shrimp girl as Dürer's picture tells you about his father. I like it that way. Do you?

About the middle of the eighteenth century, while Hogarth was still painting, two other Englishmen were rising to fame as great painters. One was Sir Joshua Reynolds, the other Thomas Gainsborough. Both were best known as portrait painters. Sir Joshua Reynolds was a few years older than Thomas Gainsborough, and so I'll tell you about him first.

I'll begin this story with an African pirate. But please don't get excited. There isn't a pirate fight in the story, much as I know you'd like to hear one. The pirate was a kind of Arab king who was holding up ships in the Mediterranean. The British were sending a captain with a squadron of ships to talk things over with the pirate.

Now, this captain was a friend of Reynolds and invited him to come along on his warship. Reynolds accepted the invitation and when he got to Italy he stayed there, to study the great paintings of Michelangelo, Titian, Correggio, and Raphael. He liked Michelangelo best. He liked Michelangelo so much he became deaf! That sounds strange, but it is true. Reynolds was working in the Sistine Chapel, studying Michelangelo's paintings. He was sitting in a draft, but was so interested in the pictures he didn't even notice the draft. Not till he got up to go did he notice that anything was wrong. But after that he began to grow deaf, and soon he had to use an ear trumpet.

Reynolds went back to London and became the favorite portrait painter of the city. There were no cameras in those days, and so no one could have a photograph taken. Instead, people went to an artist and had their portraits painted. Poor people could not afford portraits by so expensive a painter as Reynolds, and so most of his portraits are of lords and ladies and their children. The king knighted him. Then he was Sir Joshua Reynolds.

Sir Joshua worked hard and tried to make every picture he painted better than the one before. He was especially good at painting women and children. Have you ever heard of pictures called "The Strawberry Girl," "Master Hare," "The Age of Innocence," and "The Duchess of Devonshire and Her Daughter"? These are some of Reynolds's best known portraits.

Unfortunately Reynolds was always trying out new kinds of paints and oils, so that many of his pictures have become faded or cracked. Some even faded soon after he painted them. But this didn't make him less popular. A friend of his said, "A faded portrait by Reynolds is better than a fresh one by anybody else."

This picture of five little angel heads by Sir Joshua Reynolds shows five different views of the same little girl.



Courtesy of The University Prints
ANGEL HEADS

REYNOLDS

The other portrait painter, Thomas Gainsborough, liked best to paint landscapes. He couldn't sell the landscapes, however, and so he continued to paint portraits all his life. And very fine paintings they are. He made the people he painted look so graceful and charming in their portraits that he was in great demand. Gainsborough's colors are not so rich and glowing as Reynolds's—they are more silvery and gray.

One of Gainsborough's paintings that has become world famous as "The Blue Boy" is thought to have been painted because Reynolds had said a picture with much blue in it could not be beautiful. So Gainsborough painted "The Blue Boy" to prove Reynolds was wrong. Gainsborough didn't seem to like Reynolds, for some reason, and was always as rude to him as could be. Perhaps he was jealous of the other painter. But before Gainsborough died he asked Reynolds to forgive his rudeness and told him how much he admired him and his work.



THE DUCHESS OF DEVONSHIRE
GAINSBOROUGH

Gainsborough painted portraits of many of the same people that Reynolds did. They both, for example, painted the Duchess of Devonshire and Mrs. Siddons. Which of the portraits of these

two ladies is better it would be hard to say. Here is Gainsborough's famous portrait of the duchess. What a big hat she has!

And here is Reynolds's portrait of the same duchess with her daughter.



Courtesy of The University Prints

THE DUCHESS OF DEVONSHIRE AND HER DAUGHTER

REYNOLDS

Gainsborough's landscapes are more admired than they were when he was alive. Though they are not so well-known as his portraits, they will help us to think of him as an excellent British painter.

CHAPTER 24

THREE ENGLISHMEN WHO WERE DIFFERENT

GHOSTS! Do you like ghost stories? Stories of haunted houses, of chains clanking at midnight, of misty white shapes that you can see right through? Of course the best time to read a ghost story is at night. Then, though you know the story can't be true, it makes you feel creepy.

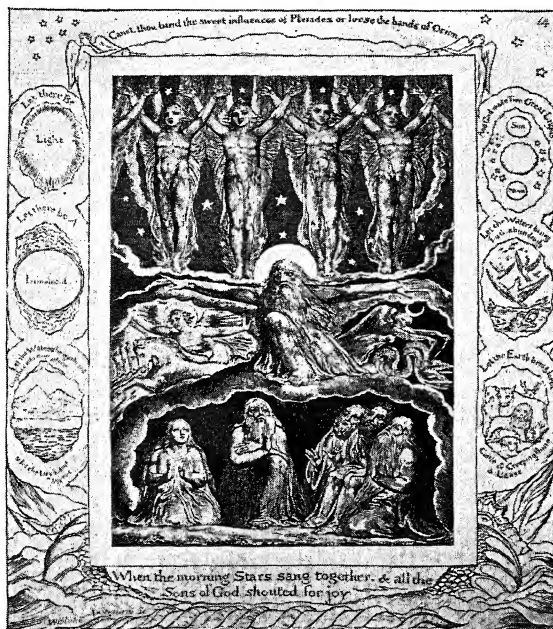
But I'll tell you of one ghost that won't make you feel creepy. This ghost won't even make you tremble in your boots. It's the ghost of a flea. It makes one smile just to think of the ghost of a flea, coming back to haunt, perhaps, the dog who scratched him to death. This flea ghost isn't in a ghost story. He's a more unusual ghost than that, for this ghost had his portrait drawn by a celebrated artist.

The artist who drew the picture of "The Ghost of a Flea" was William Blake. He was an Englishman who was living in London at the time the American colonies were fighting their Revolutionary War.

William Blake was very different from any artist I've told you about so far. For one thing, besides being an artist, he was a poet. For another thing, William Blake's pictures are not at all like the pictures of any other artist. For still another thing, William Blake saw visions. A vision is something like a dream—it is a sight a person sees only in his mind. Some people say that Blake was a little crazy, just a *little* crazy. Perhaps he was only different.

Blake had always wanted to be an artist. He studied engraving for many years, until he became an expert engraver. And then, when he

set up in business for himself, he engraved his poems and his pictures together on one plate. This was a new idea that he himself invented. Before then the pictures in a book were engraved on a metal plate, but the words of the book were printed with a printing press. Blake made both pictures and words on the same plate, so the story was really part of the pictures and the pictures were part of the story.



Courtesy of The University Prints

A PAGE FOR THE BOOK OF JOB

BLAKE

He made and engraved pictures not only for his own poems but for many other books also. The most famous of all his pictures are the ones he made to illustrate the Book of Job in the Bible. These pictures of Job and his troubles are hard to forget, once you have seen them.

Every time I think of Job I think of these pictures that Blake made. I can't help thinking of them.

Most of Blake's pictures that you see in books look like drawings. That is because they are made up of lines. An engraving has to be made with lines. But Blake generally made a painting for each picture before he engraved it and these paintings show he could use colors as well as lines.

Blake had had new ideas about painting and soon there were other English artists who had new ideas. But before telling you about them I'll ask you a question.

Have you ever seen a tree in summer time that had brown leaves? A live tree, I mean. Any one would know that a live tree has green leaves. Yet if you saw a picture of a tree painted about the time of Blake you would be surprised to see that it had brown leaves. As I told you, Gainsborough is noted for his landscapes. Perhaps you won't think him so great a painter when you learn that the leaves of his trees were generally painted brown. Now, those landscape painters must have known that real trees are green, but still they kept painting them brown. Strange, is it not? They must have thought the brown leaves looked better in their pictures.

But after Gainsborough came an English painter named John Constable and after him there were no longer so many brown trees. Constable tried to give his picture the colors he saw in real landscapes. This sounds easier to do than it really is. Even the whitest white a painter can put in a picture isn't nearly as bright as a dull sky on a rainy day. And if the picture sky *can't* be as bright as the real sky is, all the other colors have to be made a little darker than the real colors, to make the sky look bright enough. For the darker the dark parts of a picture are, the brighter the bright parts will look next to them.

Being darker doesn't keep the picture from being beautiful, but it does keep it from looking exactly like the real landscape. And so if

a way could be found to make the colors in a painting look brighter, then artists could make an outdoor picture look more really outdoorsy. And that is what Constable did. He found a way of making paints look brighter. Instead of putting the paint on smoothly, he put it on in little dabs of thick color so that if you touch one of his paintings with your finger it feels rough.

Constable found that when he used little dabs or spots of color, the whole picture became brighter. The old way of painting a green field, for instance, was to paint it all green. Constable's way was to paint the field with separate little spots of green and yellow and blue. And, strange to say, these make the field look all green, unless you get too close to the picture. When you do get too close you can see the separate spots, but at a little distance the whole field becomes one color—a brighter green than if it had been painted a smooth, solid color in the first place.

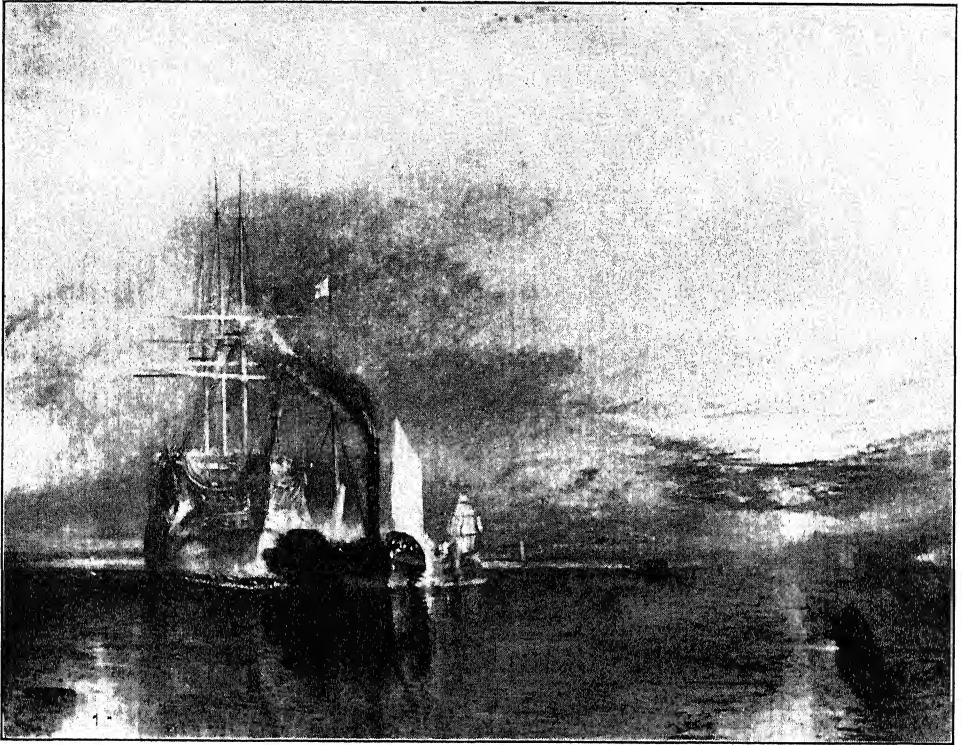
My gracious! If you have read all that you *are* a good reader! And if you have understood it, I think you are a very bright child, whether your teacher thinks so or not.

So we remember Constable for two helpful improvements in landscape painting. He made trees green instead of brown. He made pictures brighter by using rough little spots of paint in place of smooth, solid colors. On page 354 you will find one of his pictures in which there are beautiful trees.

Many people believe the best English painter of all was the landscape painter Turner—Joseph Mallord William Turner. He came nearer than any other painter to catching the brightness of color and light of nature. He loved to paint the sea and the sun.

Now, of course the sun itself is so much brighter than any paint that no one can ever put it in a picture and expect it to look like the real dazzling, brilliant sun. But a painter can paint something that people can see is meant to be the sun. Turner often did something that Claude

Lorrain had sometimes done. He painted "into the sun." That is, he painted a scene with the sun right ahead. Generally he put the sun behind a cloud or in a mist or at sunset so that its brightness would not look too unlike the brightness of the real sun.

THE FIGHTING *TÉMÉRAIRE*

TURNER

We know very well that no painter can find bright enough colors for a sunset, but people who saw Turner's sunset pictures said they were too bright to be true. They aren't true, but not because they are too bright, as these people said. It is because they aren't bright enough.

Turner could also paint the sea better than any one before him. He

was a painter of seascapes as well as landscapes. Before he painted the sea he really *studied* it—how it looked when it was calm and how it looked in a storm—how it looked in the rain and in sunshine. Once he had himself lashed tight to the mast of a ship in a storm so he could study the sea without being washed overboard.

One of Turner's most famous paintings is called "The Fighting *Téméraire*" because that was the name of the old warship in the picture. The *Téméraire* had become too old for further use and the picture shows her being towed, by a puffing tug, to the dock—to be broken up. It is just sunset and the water of the harbor reflects the gorgeous orange and yellow of the sky. It is the end of the day and the end of usefulness for the old ship that has served her country for many years.

Even in the uncolored picture on the opposite page you can get an idea of the brilliant sunset that Turner painted.

CHAPTER 25

SOME VERY POOR PAINTERS

WHY should I tell you about very poor painters? If a painter can't paint good pictures, why mention him at all? Because . . . these poor painters in this chapter *did* paint good pictures. They were poor in money, not poor in painting.

One of these poor, good painters was a Frenchman named Corot (Ko-ro). He was poor because no one would buy his paintings. Not until he was fifty years old did he sell a single picture. He wasn't quite as poor as that sounds, however, because his father gave him an allowance of so much a year. It was a very small allowance, but Corot managed to get along on it.

After Corot finished school he wanted to be a painter. But his father was in the linen business, and into the linen business the son had to go. Still he kept hoping he could be a painter, and finally his father let him stop selling linen and begin to study painting. Corot went to Italy for several years and became a landscape painter. Then he went back to France. He painted many fine landscapes, but no one seemed to want to buy them.

Now, at this time some other painters who were very poor in money, found they could live more cheaply in the little village of Barbizon than they could in the city of Paris. And they found, too, that the country around Barbizon was a much better place in which to paint landscapes. There they could see the forests and streams and fields that they loved to paint. So these poor-in-money painters moved to little cottages in and near Barbizon. We call them the Barbizon Painters.

It was Corot's idea to live in Barbizon. He liked to get up early in the morning and go out to study the trees and fields in the early light of dawn, when often the dew was on the ground and everything looked misty. He would make sketches, or quick drawings, of what he saw, and then come home and paint. He liked twilight and moonlight, too, and often painted twilight and moonlight landscapes. His pictures have a magical, dreamy beauty that has made them famous all over the world.

When he was an old man Corot's pictures began to sell. Money and fame came rolling in at last. Corot had always loved to help other peo-



DANCE OF THE NYMPHS

COROT

ple in any way he could, so now that he was wealthy he had a fine time giving most of his money away to people who needed it.

Corot was always cheery and happy with his friends, although his landscapes often seem dreamy and sad instead of cheerful and gay. Every one loved him and called him Father Corot, and so it is pleasant to learn that he finally became so famous.

Another Barbizon painter was much poorer in money than Corot. He was one of the first to go to Barbizon. He took his wife and children and lived in a little three-room house that had no wooden floors, just packed earth. Yet he was one of the greatest painters of France, Jean François Millet (Mee-lay).

Millet had always been poor. His father was a farmer, or peasant, and when Millet was a boy he worked on his father's farm. When he saw some pictures in an old Bible, he started to draw. At the rest hour in the fields the other workers would all take naps, but young Millet would spend the time drawing pictures. Finally the village where he lived gave him a little money to go to Paris to study art.

When Millet got to Paris he had a terrible time. He was awfully shy and not used to city ways, so he didn't get along well at all. He barely made enough money for food, by selling little pictures he painted. He liked best to paint the poor farmer people or peasants whose life he knew so well, and at last when he was almost starving some one bought one of his peasant paintings. This gave him enough money to get out of Paris and go to Barbizon, and in Barbizon he lived the rest of his life.

Millet's pictures of peasants at work were painted in an unusual way. The painter would go out on the farms and watch the people at work—digging, hoeing, spreading manure, sawing wood, churning butter, washing clothes, or sowing grain. Then he would come home and paint what he had seen. His memory was so good that he could paint at home without a model and get all the movements of his figures



Courtesy of The University Prints
THE GLEANERS

MILLET

right. When he did need a figure to go by he would ask his wife to pose for him.

One of Millet's paintings is called "The Sower." It shows a man planting seed. Have you ever seen a farmer sowing a field? In our country it is so often done with horses and a machine, that perhaps you don't know what a swing there is to it when it is done on foot. The sower's hand keeps time with his step. It reaches into his bag for seed and then swings backward to scatter the seed, and with each swing of his hand the sower strides forward. In Millet's picture the sower has been

working hard, but his swinging step and outflung arm still move smoothly, in time, like a machine. Only the man's head shows how tired he is.

Millet made several pictures of "The Sower," all somewhat alike. The most famous "Sower" is now in the United States, in Boston.

Another picture that is as famous as "The Sower" is called "The Gleaners." A gleaner is some one who picks up what is left in the field after the wheat has been harvested. When farmers are very poor, as they were near Barbizon, even the little that the gleaners can find is a help. You can see from Millet's picture what back-breaking work gleaning must be. And it is done by women!

Many copies have been printed of still another picture by Millet. You can sometimes buy them in the ten-cent stores. This famous painting is called "The Angelus." It shows a French farmer and his wife stopping their work in the fields to bow their heads as they hear the church bell ring out the call to prayer, the Angelus.

Like Corot, Millet at last was recognized as a great painter before he died. But he always remained poor, and when he died his friend Corot had to give his widow money to live on.

Some of the other Barbizon painters became famous too. They all used to meet in a big barn where they had tacked drawings on the walls, and there they would talk about the painting they all loved so to do.

I'd like to tell you about these other friends of Millet and Corot but —there isn't room.

CHAPTER 26

THE MOST IMPORTANT PERSON

AND now I'm going to have to blindfold you. I won't ask you to look at some pictures blindfolded. You can enjoy music that way, but hardly pictures. But let's suppose you really are blindfolded. I'm going to guide you, blindfolded as you are, out to a field this morning. I'm going to stand you so you are facing a haystack and then I'm going to take the handkerchief off your eyes and let you look at the haystack for five minutes. Then I'll blindfold you again and lead you back. It's a queer kind of a game, isn't it? Something like blindman's-buff.

Let's play it once more. The first time when you looked at the haystack it was ten o'clock in the morning. This time I'll let you look at the same haystack for five minutes about five o'clock in the afternoon. And this time the haystack will look quite different from the way it looked at ten. It's the same shape, but the colors and light and shadows are all so different that the five o'clock haystack makes a picture to your eye very different from the ten o'clock haystack. Every little while during the day the haystack changes in color and brightness. That's why I let you look at it for only five minutes at a time—so the light would not change and give your eye another picture.

Now, I'm sure you can see that if an artist painted a picture of the haystack for every hour of the day he would have many pictures of the same haystack, but each picture would be different from all the others.

That is just what some French artists did not so many years ago. Then they gave an exhibition of their work. They hung their paintings

on the walls of a room so that people could come and see them. The people who came found these paintings were very different from any they had ever seen before. The pictures were like your quick view of the haystack. They showed the colors and light that the artists had seen in quick views of the things they were painting. These views were called impressions. And so the painters soon got the name of Impressionists.

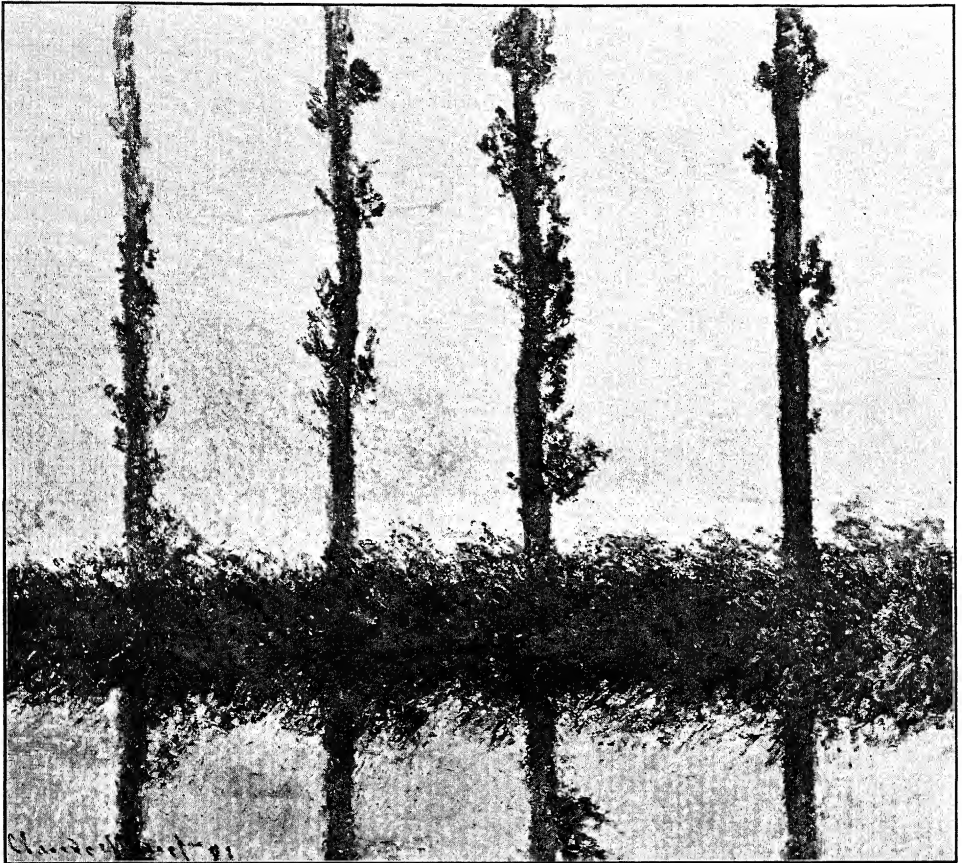
Earlier painters never thought of doing such a thing. They painted a horse one color and a haystack another, no matter whether the light always made them *look* that color or not. Really a black horse or a yellow haystack is not always black or yellow. The color depends on the light. The light shining on a black horse may make him look blue in places. But you know so well that a horse *isn't* blue that you don't notice how blue he really may look in certain lights!

Painters always used to paint shadows brown or gray or black. But if you look carefully at a real shadow it is often not brown or gray or black at all. It's just as apt to be green or blue or purple or some other color.

Of course bright light and color on an object out of doors was always hard to paint, because paints are not nearly so bright as light. But if you remember what I told you about the painter Constable, you will see how these Impressionist artists made their colors look bright and like sunlight. They put the colors on in little dots and dashes. Putting colors on in dots and dashes of separate colors does really make them look brighter. They almost seem to shimmer like real sunlight. But it also makes the pictures look quite different from the older kind of painting.

For this reason the people who saw the French exhibition of the Impressionists weren't very much pleased. These people had been used to one kind of painting, and the change was so great that they couldn't like the new kind nearly as well at first.

But after a while the Impressionists came to be understood better.



Courtesy of the Metropolitan Museum of Art
THE POPLARS

MONET

People saw that they were trying out a new way of painting and that what they were doing might be very worth while. One of the Impressionists named Claude Monet (Mo-nay) used to go out with a carriage



Photograph by Brown Brothers
THE FIFER

MANET

full of canvases and spend all day painting the same scene. He used a different canvas each time the light changed the color and appearance of the thing he was painting.

For instance, Monet painted fifteen pictures of the same haystacks and in each one had a different color and light effect. He painted twenty pictures of the front of a French cathedral as it was seen at different times of day, and each picture was different. They make an interesting series, but when you see one of these pictures by itself you are apt to be a little disappointed because the forms, or the shapes, in the painting are not so important as you think they should be. Monet was interested in the light and color, not especially in the form or shape.

Another Impressionist had a name much like Monet. His name was Manet (Man-ay). In fact, Manet was the painter who really started the Impressionists. Manet didn't break his pictures up into so many little glittering spots as Monet did. Indeed, it was only in the last ten years of his life that Manet used that kind of painting very much. Some one asked Manet once who the chief person was in one of his Impressionist pictures.

"The most important person in any picture," Manet answered, "is the light." And that was what the Impressionists tried to show in their paintings.

Here is one of Manet's pictures called "The Fifer." Probably you will like it better than Monet's "The Poplars" because *people* are generally more interesting than *things*, even if light is "the most important person" in a painting.

CHAPTER 27

POST-IMPRESSIONISM

POST-IMPRESSIONISM hasn't anything to do with fence posts. The *post* part of the title of this chapter means *after*. It is a Latin word. So the title might be After-Impressionism, which means the newer kinds of painting that came after the Impressionistic paintings. You remember Monet's work is Impressionism, where light is the most important person.

The father of Post-Impressionism was Paul Cézanne (Say-zann). He was a Frenchman, like Manet and Monet. At first he was an Impressionist himself, but he said he wanted to make Impressionism something solid and lasting like the art of the Old Masters. And after a while his work did become more solid, although none of his pictures became as well known as those of the Old Masters. Cézanne worked hard all his life at painting, but he never became popular as a painter until after his death. Luckily for him, he had money enough to live on without having to sell his paintings, for he found he couldn't sell them—no one wanted to buy them.

Another Post-Impressionist who was younger than Cézanne had a very different kind of life. This other painter didn't live quietly on a farm in southern France as Cézanne did, as you will soon see. His name was Vincent Van Gogh (pronounced Van Goch, the Goch rhyming with the Scotch word *loch*). He was a Dutchman. He tried working in an art store for his living, but if he thought his customers wanted to buy poor pictures, he gave them such lectures that he didn't get along well at all. So he tried being a schoolmaster for a few months.

I don't believe he could have been a very good teacher, because he had a violent temper. Then he decided to be a clergyman, a minister. This didn't work, either, because he soon got tired of the college for ministers where he was studying. And so he set out as a missionary to the workers in the Belgian mines. He felt so sorry for these poor miners that he gave away all his money and nearly starved, himself. At this time he began to draw pictures, sketches of the people he wanted so much to help.

His brother sent him money to live on and got him to go to Paris to study art. Then Van Gogh went to live in a little town in southern France, and there he painted many pictures.

These paintings are made up of squirming lines of paint instead of



Courtesy of The University Prints
PUBLIC GARDEN, ARLES

VAN GOGH

the dots of paint that the Impressionists used. A friend of his said, "He paints so fiercely that it is terrible to watch him." His pictures look as if he had painted them with fierce intensity.

And now comes a sadder part of Van Gogh's life. His mind began

to give way. He began to go crazy. One day a friend of his, who was a waitress in a café where Van Gogh sometimes went, asked him for a present and just in fun she said to him, "Well, if you can't give me anything else, you might give me one of your big ears."

Just before Christmas the waitress received a package. She thought it was a Christmas present. But when she opened it, out fell—an ear! The waitress was horrified. Poor Van Gogh was found in bed, completely out of his mind. He had cut off his right ear with a razor.

Of course he had to be taken to an asylum, where he finally got well enough to paint some more pictures. But the attacks of brain trouble kept coming back and during one of them Van Gogh shot himself.

A third Post-Impressionist was named Paul Gauguin (Go-ganh). Gauguin was a Frenchman of a different kind from Cézanne, and he led a life almost as strange as Van Gogh's.

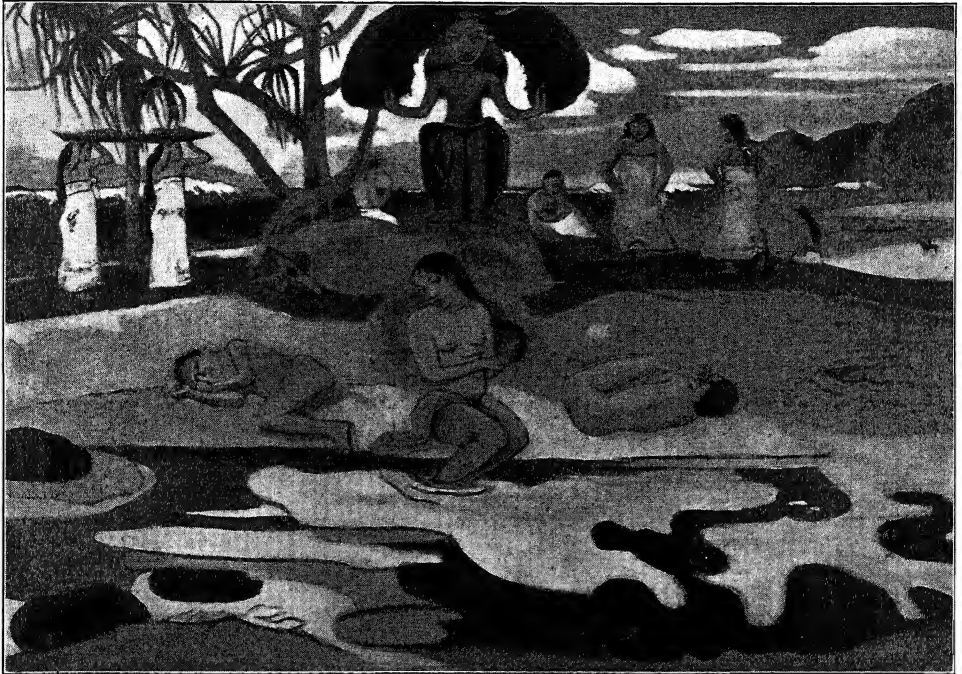
Gauguin began a different life early. He ran away from home when still a boy, got on a ship and went to sea. He made several voyages as a sailor to different parts of the world. Then he came back to Paris and went into business.

Perhaps Gauguin would never have become a painter if he had not run away to sea. For one day when he was walking down the street he came to a shop window that had some paintings in it. These paintings had the brightness and color that Gauguin had seen in the far-away Pacific isles. They brought back to him memories of his voyages so clearly that he asked who the painters were. Thus he became acquainted with the Post-Impressionists who had painted these pictures. Gauguin began then to paint too. He became a friend of Van Gogh and even lived with that artist for a while before Van Gogh lost his reason. Later, Gauguin moved to another part of France.

But he could not forget the beautiful tropic islands of the Pacific he had seen on his voyages. One day he packed up again and sailed for the island of Tahiti. There in Tahiti the painter found the life he liked

best. He lived like one of the native islanders instead of like a civilized white man. And there he painted his best pictures.

These paintings are bright with the color of the tropics and show in their brightness the people of the islands in their play and rest and work. These South Sea pictures are the ones that made Gauguin a famous painter.



Courtesy of The University Prints
MAHONA NO ATUA

GAUGUIN

CHAPTER 28

EARLY AMERICANS

NOW we come to painting in America. I'll have to tell you right at the beginning that there is much more American painting, and that there are many more American artists, than I have room to tell you about in this book. America has had artists since before the American Revolution and to-day we have as many good painters at work as any country in the world—perhaps more.

The first American artist to become really famous was Benjamin West. Benjamin West's family lived in Pennsylvania when the woods were still full of Indians. There he was born and there he grew up. As his family were Quakers, the Indians were friendly to them, for the Quakers had made a treaty with the Indians to buy their land from them instead of just taking it by force or by cheating.

When Benjamin West was a boy he loved to draw pictures. The Indians were pleased when he drew pictures of them. Of course he didn't have any paints or paint brushes nor even any pictures to look at. There weren't such things in the little frontier village where he lived. So the boy was delighted one day when the Indians gave him some of the yellow and red paint that they used to paint their faces with. Benjamin ran home and showed the paints to his mother. Then his mother gave him some bluing which she used in washing clothes. Now he had yellow, red and blue paint, but no paint brushes. How do you think he got a brush? He used the cat!

Yes, he cut some hairs off the cat's tail and made them into a paint brush. When the first brush wore out, he got some more hairs from

the cat. After a while the poor cat had hardly any hair left on her tail and was beginning to look very ragged in other places. Benjamin's father thought the cat had the mange.

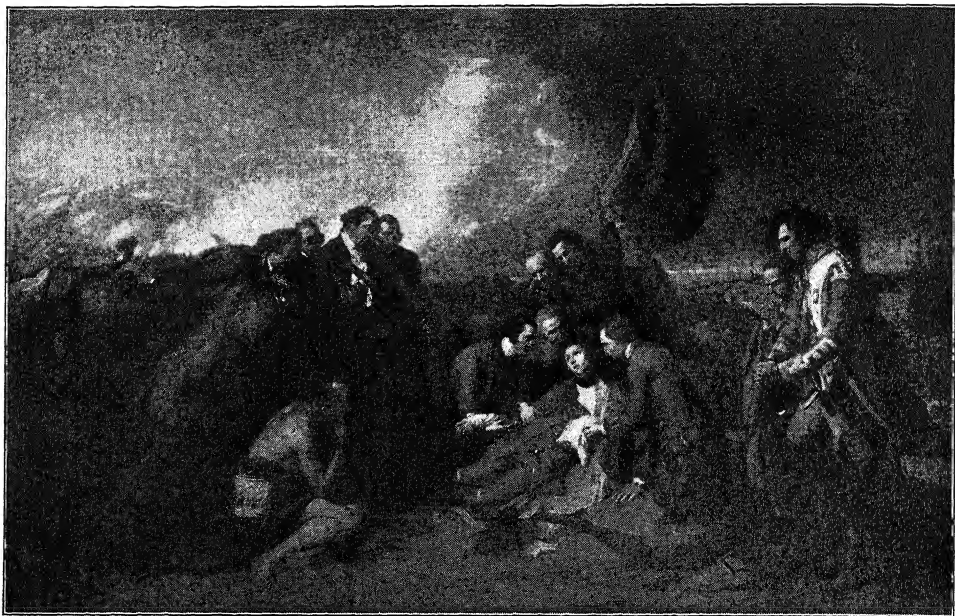
When Benjamin West grew up he went to live in Philadelphia, and there he worked hard to become a good painter. Then he decided to go to Europe where he could see and study famous paintings. When he reached Rome he was taken to see a statue of a Greek god called the Apollo Belvedere. (See the picture on page 194.)

"It looks like a Mohawk warrior," he said, thinking of the strong and graceful Indian braves of Pennsylvania.

West then went to England and settled in London. He became a very popular painter. The king, George III, liked him and his work so much that he made him court painter. And so Benjamin West never returned to America. But he always welcomed American artists who came to London and was very generous and helpful to them. In fact, his studio was a kind of school for young men learning to paint, and many well-known American painters studied there. He was like a father to them all.

West's pictures often were very large and generally were filled with many figures, though some were smaller portraits. They were admired by every one and some people even said they promised to be as great as the paintings of Michelangelo. Nowadays we think West's paintings are not really very great paintings, but isn't it pleasant to hear of an artist's pictures being so well thought of while he was alive and could enjoy their success? Many painters have had to struggle all their days as nobodies, with their pictures not admired until after those painters died, so that I'm glad the opposite happened to *this* painter.

One of West's best-known paintings is "The Death of General Wolfe." General Wolfe was leader of the British soldiers when they fought the French at Quebec to decide whether France or England should own Canada. The British won, but General Wolfe was shot. Both the French and English were helped by Indian warriors. Notice



Courtesy of The University Prints

THE DEATH OF GENERAL WOLFE

WEST

the Indian in the picture. West grew up with Indians and so could paint them even in England with the nearest Indian three thousand miles away.

The picture caused a great stir in London, because the soldiers in it are dressed in their regular uniforms. In England it was thought that all pictures of history should show people dressed as Greeks or Romans. Even the king told West he oughtn't to put his figures in such modern costumes. But when the picture was finished every one, including the king, said West was right. After that, artists painted their figures in the clothes the people they painted really wore.

One of the young Americans who studied under West in London was Gilbert Stuart. He was born and raised in New England before the Revolution. He thought he could do better in old England, so he

traveled to London. There he became a painter of really fine portraits. People then thought Benjamin West a much better painter than we now think he was, but Gilbert Stuart's paintings are just as well thought of to-day as they were when he painted them.

After living many years in England, Gilbert Stuart came back to America. It was now the United States of America, for the Revolution had been fought and won. Stuart had come back, he said, to paint the portrait of George Washington, whom he greatly admired.

Washington posed for three portraits by Gilbert Stuart. The last of these three is the most famous and best-loved picture of Washington that we have. It is called the Athenæum portrait because it belongs to the Athenæum Club in Boston. You can see a small copy of it on many of our postage stamps, for instance on the three-cent stamp of 1932 and 1933.

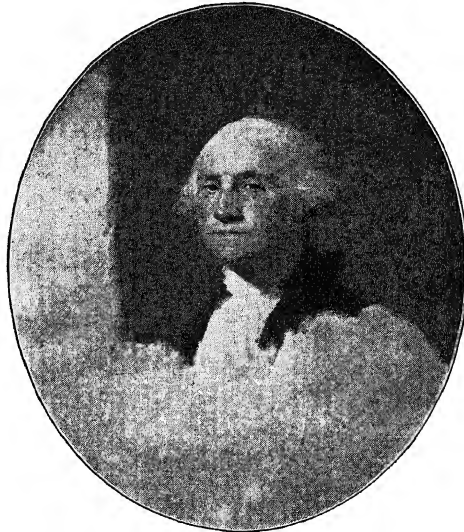
You may wonder why this portrait on the next page seems unfinished. The reason is that Gilbert Stuart liked it so well that he wanted to keep it. He had promised the portrait to Washington when it was finished, but it was never finished. The artist couldn't bear to finish it! Instead of the original, Washington agreed to take a copy that Stuart made of it for him. As a matter of fact the artist painted about fifty copies of the portrait from time to time and sold a copy whenever he needed money.

Gilbert Stuart went to live in Boston and never returned to England. He painted five other Presidents besides Washington and so is sometimes called the Painter of Presidents.

Now, there were, of course, other American painters in the early days of the United States. Most of them were portrait painters, because so many people wanted portraits. There were still no cameras to take photographs. It is from the portraits of these early painters that we know what the famous Americans and beautiful women of those days looked like.

These early portraits have become very valuable, so that many of them are now in museums. Some, however, still belong to the families

whose ancestors had their portraits painted. If some one ever shows you a portrait by Copley, Sully, Malbone, Trumbull, or one of the Peales be sure to look at it carefully and with respect, for it is the work of one of the famous early painters of America.



Courtesy of The University Prints
THE ATHENÆUM PORTRAIT OF WASHINGTON
STUART

CHAPTER 29

MORE AMERICANS

I KNOW you've heard of Robert Fulton, the inventor of the steamboat. But have you ever heard of Robert Fulton the painter? Does it seem strange they should have the same name? Then this ought to seem even stranger—they were born the same year. Stranger yet—they died the same year. But—

It's really not strange at all, because the painter and the inventor were the same Robert Fulton. Robert Fulton's first profession was portrait painting. He studied under Benjamin West in London.

I know you've heard of Samuel F. B. Morse. Surely. He invented the telegraph. But have you ever heard of Samuel F. B. Morse the painter? Does it seem strange they should have the same name? It's really not strange at all, because the painter and the inventor were the same Samuel F. B. Morse. Morse's first profession was portrait painting. He too studied under Benjamin West in London.

Both were inventors. Both were painters. Both were helped by West. And they weren't bad painters, either. Of course they weren't nearly such good portrait painters as Holbein or Hals or Dürer. But you'll find them in almost any history of American art.

I wish I could tell you more about these and the many other early American portrait painters. About Rembrandt Peale, for instance, who first provided a city in the United States with gas lights for its streets (and also studied under Benjamin West). Or about his father, Charles Willson Peale, who had a famous museum of all kinds of queer things. Or about—

But I'll have to stop, for it's time to tell you instead about the next group of American painters. These were landscape painters. First came these interesting old portrait painters, then came landscape painters.

Most of the early American landscape painters are not quite so well-known as the portrait painters. These landscape painters tried to put into their pictures all the little details that they saw in nature. Every stick and stone and bush was painted in very carefully, and their pictures as a whole weren't so good as if the painters had left out the little things so you could look at all the picture at once. Instead your eye sees the picture piece by piece.

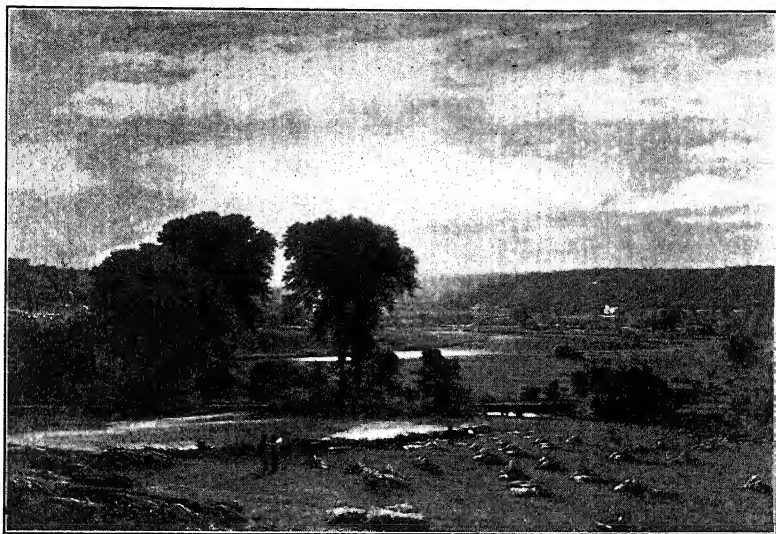
They generally painted scenes that were very impressive, like views of mountains and big rivers and valleys seen from hilltops. Finally, however, one landscape painter changed this. He painted everyday peaceful scenes, like a meadow or some trees. He left out the unimportant details so you could see a beautiful picture instead of just a copy of a piece of real country.

I don't mean you to think that the real country isn't beautiful. A real scene out of doors *is* beautiful—more beautiful, generally, than any picture of it could be. But, you see, a painter can never make his picture look exactly like the real, beautiful scenery itself and so it's often better for him to make his *painting* a beautiful thing and not try to make it exactly like a real scene. A painter has to do this mostly by trying to make you *feel* what he felt when he saw the scene, rather than trying to show you every little thing he *saw*.

So this painter of everyday peaceful scenes, whose name was George Inness, tried to make people *feel* how beautiful he thought the scene was. George Inness used very beautiful colors that harmonized, or went well together. If there were some bits of color in the real scene that would not harmonize with the other colors in the picture, he left them out. If the picture looks better without having every detail clearly put in, why not paint it without the detail? This is what George Inness

thought. And so his landscapes gradually became better and better pictures as he learned to leave out the things he saw that would prevent the picture from being beautiful.

Do you still know what I'm talking about? I know it is pretty hard to understand. I hope you will go to a museum some day and see one of Inness's paintings. Then you will be able to enjoy the colors as well as the shapes of what he painted. In this illustration of a famous picture of his called "Peace and Plenty," for instance, you can see



Courtesy of The University Prints
PEACE AND PLENTY

INNESS

the shapes, but I can only tell you of the warm, glowing, golden light that streams across the original painting.

I can only tell you, too, that George Inness was one of the best American landscape painters. You will have to see some of his paintings themselves before you can really appreciate their true beauty.

A painter very different from George Inness was Winslow Homer. Winslow Homer is famous as a painter of the sea. Boys and girls can

hardly help liking his pictures. Winslow Homer didn't care to paint quiet seas. He preferred stormy ones. His pictures of waves dashing high against the rocky New England coast have been called the best sea paintings that any artist has done. Winslow Homer loved the sea.



Courtesy of The University Prints

THE FOG WARNING

HOMER

He built his house on the rocky coast of Maine, where he could always watch the ocean.

He loved to hunt and fish, too, and often went into the Adirondack mountains—they were really wild in those days—and there he painted hunting scenes and canoes shooting the rapids and the guides at work.

When Winslow Homer took a trip on the ocean south toward Bermuda or the West Indies, he painted sea scenes of stormy weather there. He was fond of painting the fishermen who went in their schoon-

ers to fish on the Grand Banks out at sea. The picture shows you one of these fishermen.

The fisherman is in a boat called a dory that has been sent out from the schooner. You can see the fish the man has caught. But a fog is coming up and the fisherman has to row hard and fast to get back to his schooner so as not to be caught in the fog. If the fog catches him he can only hope to get safely back by listening for the fog horn on the ship and rowing blindly toward the sound. It is dangerous business, alone in an open boat on the Atlantic, with the fog rolling in. Let's hope he reaches the schooner.

Now, instead of simply telling you that these two painters, George Inness and Winslow Homer, were fine painters, I'll say it this way: The more you see of their paintings, the more, I'm sure, you'll like them.

And I'll add this: You don't have to wait till you're grown up to understand and like their pictures. Inness and Homer painted pictures that boys and girls surely must like. That's what I think.

CHAPTER 30

TWO EUROPEAN AMERICANS

PAINTINGS sometimes go visiting. In 1932 a famous painting was carefully taken from its home in the Louvre in Paris, put on an ocean liner, and allowed to go on a visit to New York. The last time this painting had been in the United States was fifty years before. Then, no one thought enough of it to pay the thousand dollars that its painter was asking for it. On its second visit crowds of people went to see the painting, and if any one had offered many, many thousands of dollars for it he could not have bought it. For it is now one of the great art treasures of the great French art museum and it is not for sale. In New York it was treated as an honored guest.

The man who painted this visiting picture named it "An Arrangement in Gray and Black." But it became too well loved to be called by such an uninteresting name. So every one calls it now simply "Whistler's Mother." Whistler was the artist who painted it.

James McNeill Whistler was an American, but most of his life was spent in Europe. He was a very conceited little man. He quarreled with his friends and seemed to like making enemies wherever he went. This probably helped him to become famous, because it kept people talking about him. He was always news. Perhaps that is why he wore a monocle, which is an eyeglass for just one eye, and why he carried an extra long cane and signed his pictures with a butterfly. Perhaps too, that was why he even put rouge on his cheeks to make them look pink! He liked to be talked about. He liked to be news.

But of course, no matter how much people talked about him,

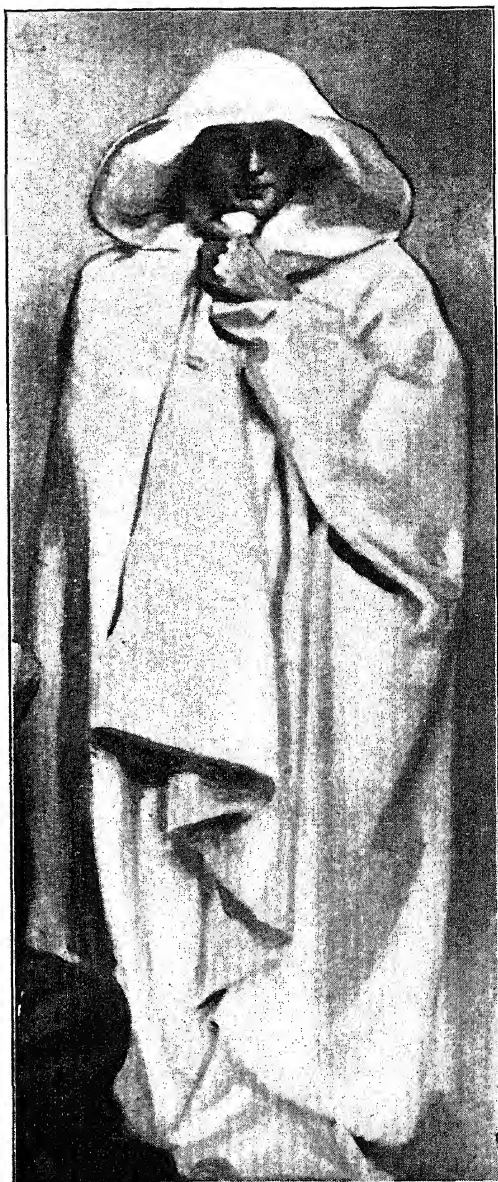
Whistler would not have been a great artist if he had not painted good pictures. And every one agrees that his "Mother" is a good picture. It is a different kind of portrait from those other artists had painted before. That is why it wasn't admired as much at first as it is now. Whistler's mother is shown sitting beside a wall. On the wall hangs a picture in a black frame. You can see that everything in the painting is in straight lines except the old lady herself.

How big would you guess the portrait of Whistler's mother is?



WHISTLER'S MOTHER

WHISTLER



THE PROPHET HOSEA SARGENT

Would you be surprised to hear that the mother in the picture is life-size? As she is life-size, you can see that the painting is a rather large one.

I think you would be surprised, if you could see some of Whistler's paintings, at the way he used colors. Some of his pictures are almost all blue in color—dark blues and light blues and medium blues, all blended to make a picture that is unlike the picture of any artist who used many different colors. Some are almost all white. "The White Girl," for instance, shows a girl in a white dress seen against a white background. You can guess that that is not the easiest kind of picture to paint and that Whistler must have been skilful to do it successfully. He was—very skilful.

Another famous American painter who lived most of the time in Europe was John Singer Sargent. During his lifetime Sargent became the most famous living painter of portraits. He painted portraits of many rich people and many important people. Indeed, it was an honor to have Sargent paint your portrait.

Most of Sargent's portraits are no doubt very good. They are still admired very much, but I like his wall paintings in Boston best of all his work. When the Boston Public Library was built, Sargent was asked to decorate the walls on the third floor. He painted religious pictures for these walls. One wall shows the children of Israel worshipping the old false gods. Underneath this is a long row of Hebrew prophets from the Old Testament. These prophets seem to be bewailing the evils of their people's ways. The prophet pictures have become such favorites that you see framed copies of some of them on the walls of houses all over the United States.

On another wall Sargent painted saints and angels, with the crucified Christ in the center. He painted these figures with bands of real gold about their heads and with the figure of Christ carved like a statue as well as painted. People who saw them marveled that a portrait painter could paint these large wall decorations so splendidly. Now visitors to Boston go to the library just to admire the wall paintings there. I advise you to see them too, when *you* go to Boston.

CHAPTER 31

REAL-MEN ARTISTS

WHAT pictures do *you* like best? Do you like pictures of the Wild West? Pictures of the Indians with their horses and dogs and rolled-up tepees taking the trail to new hunting grounds? Pictures of cowboys with their six-shooters and lariats, riding the herd or roping broncos? Pictures of half-breed hunters with their fur caps and trusty rifles, making their way through a heavy snow-storm? Pictures of soldiers of the United States cavalry patrolling the Indian country to keep order and protect property?

Are these the kinds of pictures you like?

If they aren't, I'll be disappointed, for *I* like them very much. Even if they were painted by a poor painter, I'm afraid I'd like such pictures just because I can't help liking Indians and cowboys and soldiers.

Luckily, there was an American artist who painted such pictures very well. His name was Frederick Remington. Frederick Remington didn't sit home in a studio and ask Indians to come and pose for him. He went out to the Wild West and painted them as he saw them living their daily lives. He wasn't a "sissy" painter. Even if Frederick Remington had never written books about his life in the cowboy country, we should know by his paintings that he had lived there among real cowboys and Indians.

At first Remington didn't paint. He drew. For when he began to make pictures he was an illustrator. An illustrator's job was to draw pictures in black and white for magazines and books. He was something like a human camera, trained to put down on paper, with pen

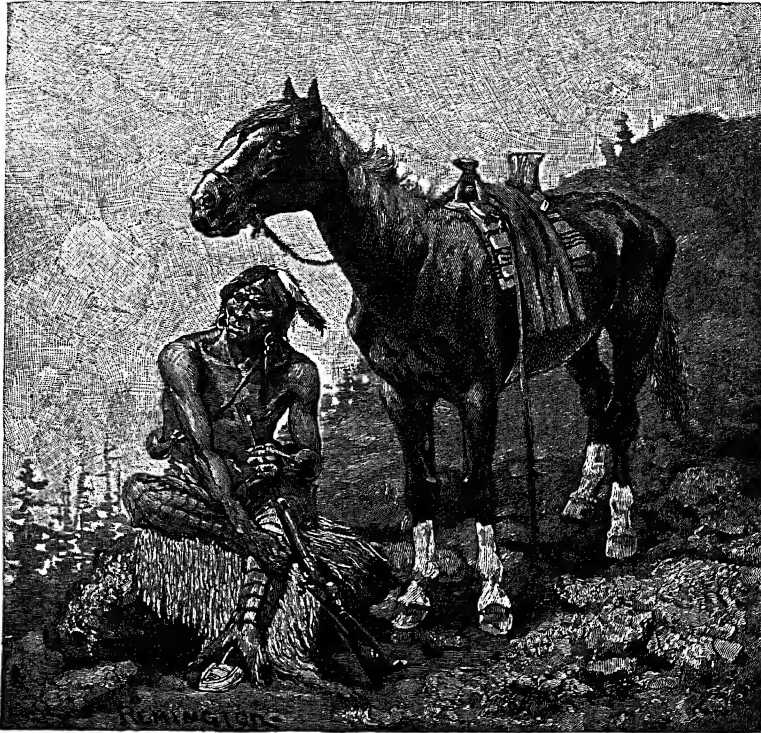
and ink, life in the West just as it was, so people in the East could know what it was like.

Often illustrators do not become great painters, and at first Remington wasn't a great painter. When he began to paint with colors instead of simply drawing with pen or pencil, he showed the cowboys and Indians all right, but the colors he used were too bright and glaring. Of course on the plains and bad lands of the West the colors that he saw were really bright and glaring in the brilliant sunlight and clear atmosphere. Gradually, however, his pictures became better paintings as he learned to use the bright colors better. His later pictures are really fine paintings, I think, and not just brightly colored illustrations.

Frederick Remington didn't paint the exciting happenings only. He liked to paint his Indians, for instance, as plain everyday Indian people and not to have them always dressed in feathers and war-paint. In other words, his pictures show us the real Indians, lazy or hard working, bad or good, dirty or clean, out hunting or at home on the reservation; and not just the picture book kind of Indians which you can see in a Wild West show or in the movies. His soldiers are not always dressed up for parade or marching forth to a stirring band, like picture book soldiers, but are real men, cooking their suppers over the camp-fire, guarding wagon trains, cleaning their horses. His cowboys are real cowboys working for their living, not just the sort of cowboys we see in the moving pictures. "Men with the bark on" is what Remington called these rough and ready men of the West.

And as for horses! Frederick Remington, let me tell you, could paint horses that were *real* horses. People aren't all alike. Neither are horses. Frederick Remington's horses aren't just picture book horses any more than his Indians are picture book Indians. Each horse is a special horse, different from any other horse. They are stupid or bright, wicked or gentle, lazy or full of life, just as real horses are.

Besides being a wonderful illustrator, a writer, and a good painter, Remington was a sculptor. He made statues of men on horseback that



THE PONY OF THE NORTHERN ROCKIES

REMINGTON

seem full of life and action. You can see one of these statues, a bronze cowboy on horseback, if you go to Philadelphia. It stands in Fairmount Park.

So, if you want to see what the real Wild West was like, not so many years ago, get hold of a book illustrated by Frederick Remington. You'll really enjoy the pictures.

Remington was an American painter who painted American people.

So was a later painter named George Bellows. George Bellows also painted the kind of pictures I think you'll like, only *his* pictures are of the eastern part of the country, especially in and about New York city. Bellows wasn't a "sissy" any more than Remington. He was such a good baseball player on his college team that he almost became a professional ball player, but decided to be a painter instead. He always liked athletics.

Some of his pictures show men and boys in swimming along the New York water-front, some are of polo games and some very well-known ones are of boxing matches. George Bellows painted other pictures of quieter subjects. He painted some fine pictures of old ladies and little girls.

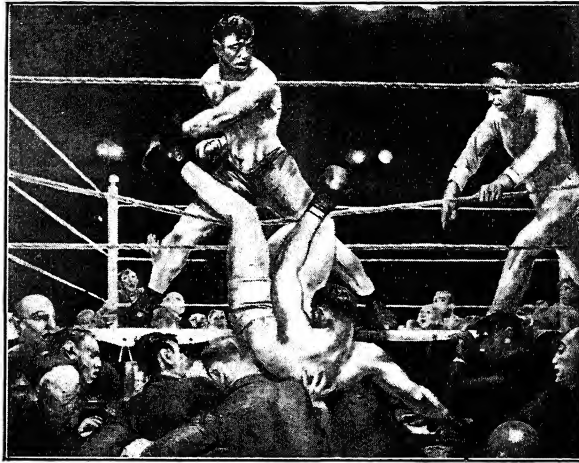
He was an illustrator, too, as Remington was, but Bellows's illustrations were made in a very different way. They were made first on smooth stone and then printed with ink on paper from the stone. This kind of picture is known as a lithograph. Bellows was an unusually fine lithographer. During the World War Bellows made a famous lithograph showing the English Red Cross nurse, Edith Cavell, who was shot by the enemy as a spy.

One of Bellows's well-known paintings is of the boxing match between Dempsey and Firpo for the heavy-weight championship of the world. Firpo was a South American boxer who was very strong. He was called the Wild Bull of the Pampas because of his tremendous strength. Once in the match the Wild Bull knocked Dempsey right through the ropes and down into the laps of the people looking on. But this didn't seem to damage Dempsey much, for he finally won the match. Bellows's picture shows Dempsey sailing out of the ring after Firpo's powerful punch. The picture is very dark in some places and very bright in others, because all the light was turned on the ring like a big ceiling spotlight on the stage. The picture shows how well Bellows could paint furious action.

Now you will also see that Bellows could paint a quiet picture.

Look at the portrait of his mother. It isn't very much like Whistler's picture of his mother, is it? Yet the two mothers seem to be about the same age. Notice the dark and light in this picture. Bellows seemed to like to have some very dark parts and some very light parts in his paintings, and also in his lithographs.

If you are a boy, probably you will like the boxing pictures best.



Courtesy of the Metropolitan Museum of Art
DEMPSEY AND FIRPO

BELLOWS

If you are a girl, perhaps you'll like the quieter pictures that Bellows painted. Whichever kind you prefer you can find among the works of George Bellows.

George Bellows and Frederick Remington are just two of the many American artists that should be in a history book of art. I wish I could tell you about the other American painters, but to tell about them all would make this book very much too fat, and no one likes too fat a book.

It would be fun to tell you of the artists who are still alive and



Courtesy of The University Prints

BELLOWS'S MOTHER

BELLOWS

painting pictures while you are growing up. I have hardly mentioned the wall paintings—mural paintings, we call them—that are being used more and more to decorate the rooms in new buildings of America. You remember those of Sargent in the Boston Public Library.

Almost every large city in the United States now has good mural paintings in some of its buildings. If you live in a city, try to find out where these mural paintings are and then go to see them. They are very interesting. When you learn the name of the artist who painted them, see how much you can learn about his other paintings and about him.

You can have fun on a rainy day making a scrap-book of American paintings and statues. Look in the brown picture section of the

Sunday newspaper. Often there are pictures of paintings there. American art isn't mostly in the past. It's being produced right now, along with new kinds of airplanes, automobiles, and sky-scrapers. Real artists are even painting pictures for magazine advertisements. Boys and girls like to collect things, and a collection you could be proud of would be a scrap-book of American Art. I know scrap-books are fun to make, because I've made them myself. I'm making one now. Try one, yourself, and get some fun out of all this art that is being produced in your country.

And, if you like real-men artists, don't forget Remington and Bellows.

PART II
SCULPTURE

CHAPTER I

THE FIRST SCULPTURE

WHEN I was a kindergarten kid, I used to make out of clay a bird's nest with round eggs and a bird sitting on top. Perhaps you have made the same thing. That was sculpture, but I didn't know it.

When I was a bigger boy, I used to make in the winter a snow man with a broom handle for a gun and lumps of coal for eyes. That was sculpture, too, though I didn't know it.

When I was a still bigger boy, I used to take the soft part of a piece of doughy bread and press it into a dog with a head, tail, and feet. That was sculpture, though I didn't know it and my mother didn't know it, either, and sent me to the kitchen for playing with my food.

So I was a sculptor until I was twelve years old—and have never been a sculptor since.

But other boys have not stopped being sculptors when they became young men. Once upon a time a boy in a kitchen carved a lion out of a piece of butter and sent it to the table. He became a great sculptor when he grew up. His name was Canova. I'll tell you about him later.

Men have made sculpture ever since the world was young. But at first the sculpture that men made was very little different from drawing. The artist first drew his picture on something flat, then he carved the lines deeper so that, if it were outside, the rain would not wash the drawing away, nor the weather wear it down. This kind of drawing or sculpture is called sunken relief.

Then, after that, sculptors rounded the edges of the figures they had carved and cut away the background so that the figures stood up a

little above the background. This is called *low relief* or *bas relief* (spelled bas but pronounced bah), which means the same thing. You may have a bas relief in your pocket and not know it. A penny, nickel, dime, or any other piece of money that has figures on it is bas relief.

Then sculptors began to round the figure still more and cut away still more of the background so that the figure stood out still more. This is called high relief or half round, for the figures were half-way out of the background.

Later, sculptors cut away the background entirely, so that the figure stood out all by itself. This is called full round—you can go “round” it. You will see such pieces of sculpture of men or animals in the parks or squares or museums.

Long, long before Christ was born, the Egyptians had artists who carved pictures in sunken relief on the walls of their great buildings. Here is the front wall of a great temple in Egypt on which you can see such figures cut all over the wall.



GREAT TEMPLE GATES

Some figures are sitting and some are standing and all may look peculiar to you. Can you tell why?

All of these carved Egyptian pictures or sunken reliefs have two things quite wrong with them, two things quite impossible, besides several things very peculiar. I wonder if you can see what the two wrong things are.

Here is the first thing: the feet are stepping directly sideways and the faces are all turned sideways too, but the shoulders are front view. Now, of course, no one really walks that way, with head and feet sideways and shoulders front view. So the first wrong thing is that the figure is twisted.

The second thing is the eye. What you see is the side face—not the front—yet the eye is the shape of an eye when you see it from the front, not as seen from the side. All their reliefs had the same peculiar shaped eye, also the same twisted bodies. Shoulders and eye are front view, while everything else—hips, legs, and feet—you see sideways.

But there are other strange things to notice about these figures. The man and woman have very little clothing on and, though they are king and queen, they are barefooted. That's because Egypt is a very warm country. In some warm countries, even to-day, neither rich nor poor, prince nor pauper, wear shoes and stockings. I once went to a dinner party in one of these warm countries and all of the ladies and gentlemen were barefooted. It seemed very peculiar to see the ladies and gentlemen, all gorgeously dressed and wearing many rich jewels, go to the table barefooted!

But to make up for having little on their bodies, these Egyptian figures have a lot on their heads—not regular hats but crowns. These crowns mean something. The woman's crown—she is a queen—is like a bird cap. The bird is the vulture that feeds only on dead bodies, and above the vulture cap is a moon between two horns. The man's crown—he is a king—is called a *pschent* (p-skhent').

These figures are all sunken relief. Now here is the next kind of relief called low relief or bas relief.

This shows the Goddess Isis—the famous goddess of old Egypt—sitting. She is wearing a head-dress and you can see very clearly the shape of the eye and the details of the head-dress. In her right hand she carries a rod or scepter—it looks something like a poker—to show she is a queen and in her left hand a strange object which is called the Nile Key.



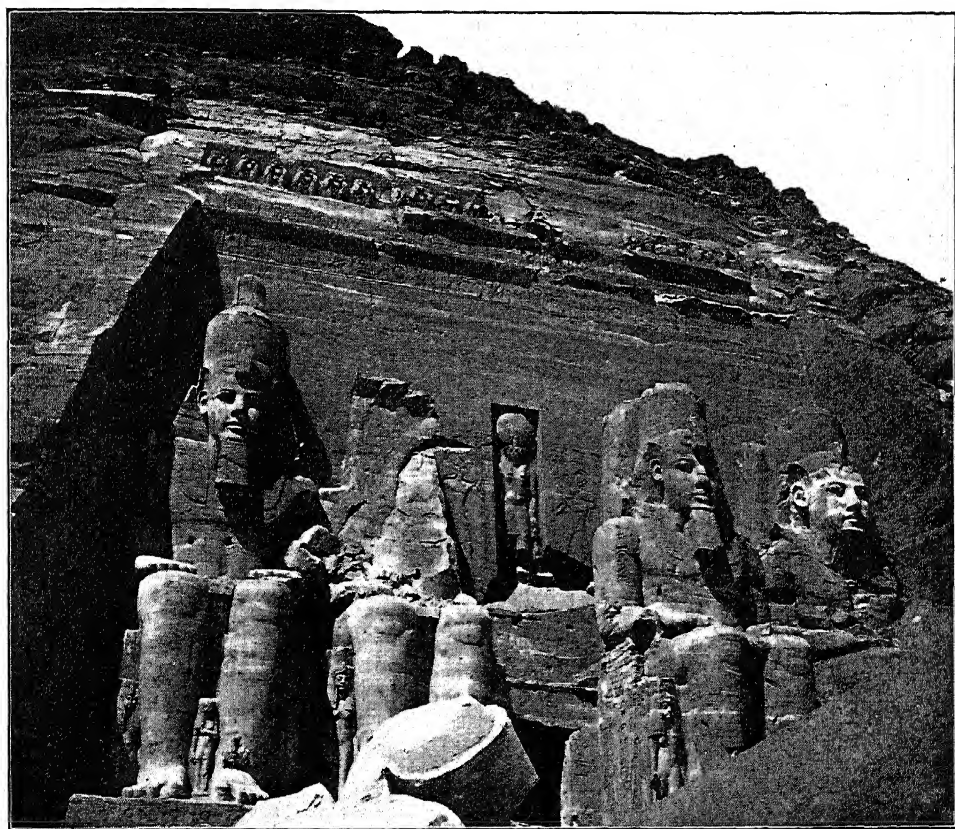
THE GODDESS ISIS

The peculiar designs on the sides of this picture are the kind of picture writing you read about in the first part of this book—do you remember? They are called *hieroglyphics*.

For high relief, I'll show you four huge figures on the front of another temple in Egypt—the Temple at Abou Simbel. They are almost cut away from the background, but not quite. These figures are colossal—that means gigantic, huge, or mammoth—a real man standing beside one, wouldn't reach half-way to the knee. The Egyptians liked to make giant figures. You'll notice also that these giant figures are seated in a very stiff position, sitting bolt upright, with both feet flat on the ground and both hands flat on the knees. They are all figures of the same king, Rameses II, called Rameses the Great, for he was the greatest of all the Egyptian kings, though one of the most cruel.

Rameses II was the Pharaoh who ordered all the Israelite babies

killed and it was his daughter who found the baby Moses in the bul-rushes and saved his life. Rameses's hobby was building temples and statues of himself. He had this temple cut out of the rocky cliff and these huge statues of himself made on the front. The one to the left is the best preserved. Little remains of the next figure. That funny thing on his chin is a beard.



TEMPLE OF ABOU SIMBEL

CHAPTER 2

GIANTS AND PYGMIES

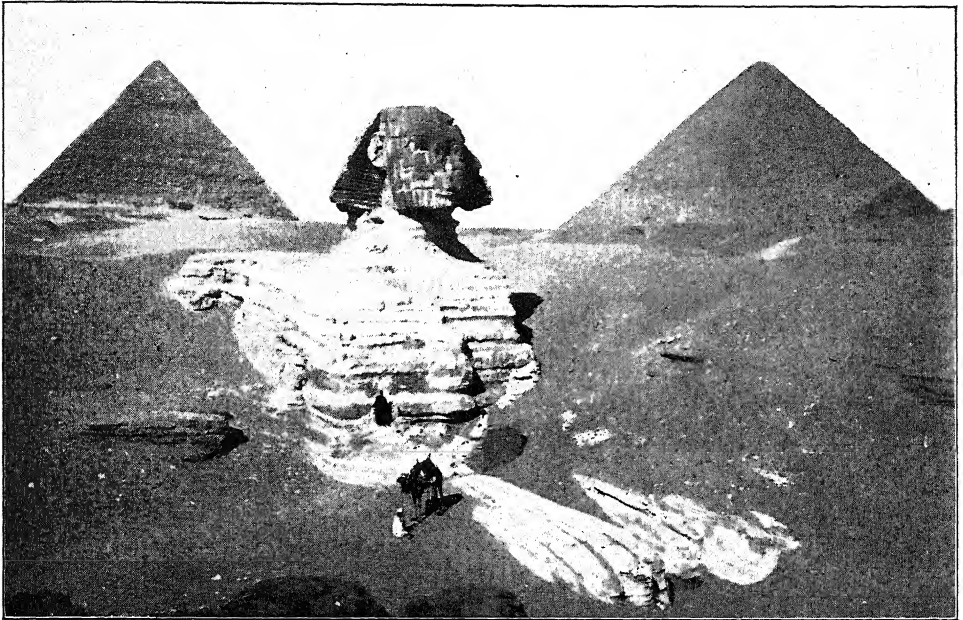
THE Egyptian sculpture in the full round was usually giant size, as tall as a house, or the other extreme—tiny statues only an inch or so high. The statues of their kings and important people, the Egyptian sculptors usually made of giant size—colossal. They thought a statue the size of an ordinary man or woman was not nearly big enough for a king or a queen.

The biggest statue in the world is the Great Sphinx which is near the three great pyramids. It is a huge lion with a king's head. The Egyptians liked to combine men and animals in this way, but more often they put an animal's head on a man's body. A cat's head or a bird's head on a man's body seems to us most unpleasant—a monstrosity that makes us shudder. But a man's head on an animal's body seems only a myth and doesn't shock us.

The Great Sphinx was supposed to be the God of the Morning and so faces east—always facing the rising sun and gazing at it unblinkingly as he has done each morning for thousands of years. His nose is as tall as a man. The triangular pieces at the sides of his head are not hair, they are a peculiar hood.

There are many more sphinxes in Egypt, but all much smaller than the Great Sphinx, and these smaller ones usually were arranged, with many of them in a double row, to form an avenue leading up to some temple.

Farther up the Nile, there are two colossal seated figures sitting on thrones side by side, gazing out over the plain. They are called, on



THE GREAT SPHINX AND PYRAMIDS

account of their colossal size, the Colossi, and each is made out of a single stone. They are weather-beaten and broken, but you do not need much imagination to see in your mind's eye what they once were. They of course are Egyptian kings—or, rather, two statues of the same king. These two also face the sun as it rises in the east and one of them is called the Vocal Memnon—that is, the singing or sounding Memnon, though Memnon was not the king's name. His name was Amenhotep. We know the names of few of the old sculptors who made the statues, but we do know the name of this sculptor who made these statues of Amenhotep, for he had the same name as the king. Perhaps he was a slave. When we had slavery in our own country, a slave often used to take the name of his master.

For some reason that no one has ever perfectly explained, the Vocal

Memnon gave forth sounds, perhaps like the tones of a great organ when the sun rose, a hymn to a new day, though the Vocal Memnon did not sing every morning or even every year. When it did sing, it was supposed to be a sign of something—an omen people called it—but an omen of what, no one knows. It is believed that about the time of Christ it was upset by an earthquake and that when it was replaced, it ceased its morning song. It has not sung for nearly two thousand years and some people doubt that it ever did, though people even at the time of Christ used to travel long distances just to hear it sing and were disappointed if it didn't. Many who did hear it, however, have carved on the base their names and date when they did hear it. So there seems to be little doubt that it did sing once upon a time. Some scientists think the sun's rays striking the cold stone in the morning wrought some change that made the sound. It is one of the mysteries of which there are so many in Egypt.

It is strange that one of the oldest pieces of sculpture in the world is made of wood—strange because wood of course does not usually last as long as stone. Strange, too, that it is not the statue of a king or a queen or a god, for that is what the Egyptians usually made. What do you suppose it is? A school-teacher!

This piece of sculpture is the figure of a rather small, fat, bald-headed man carrying a tall walking-stick. The statue is small, smaller than a real man, perhaps to show that he was not a king or any important person. By some people he is called the Schoolmaster of Boulac. So you can see what a school-teacher may have looked like thousands of years ago. But others say there were no regular schools or teachers then, and they call him the sheik or chief of a tribe. Still others say no, he looks like the boss of a gang of workmen, and they believe he was the boss of a gang that worked on the Great Pyramid. So you can take your choice, for no one knows his name or what he was or who made him. The statue is in the great museum at Cairo, the capital of Egypt. Though it was made so long ago, it looks much more



THE SCHOOLMASTER OF BOULAC

natural and lifelike than later Egyptian sculpture—like a real person. It is said that even the old Egyptians thought it so natural that they chained its feet to keep it from walking off!

Another figure made about the same time is of a man seated and holding a writing tablet on his lap. It is of stone and it was painted—not the natural color of a man but—guess what color? **Red!** He was a professional writer—that is, one of the few men who knew how to write and made a business of writing for those who could not write, and most people at that time could not. Think of hiring a stranger to

write your letters! Such a person was called a scribe. He was a kind of secretary who took dictation. Even kings and queens could not write and had to have scribes to write for them. This figure is now in the Louvre in Paris, to which place, of course, it was carried from Egypt.

Often Egyptian sculptors went to the other extreme in making tiny statuettes, some only a few inches high, of their kings and queens, their gods and goddesses and sacred animals. Most of these miniature statues were cut out of the hardest kinds of stone—stone that would turn the edge of our modern tools. We suspect that they must have been cut with flint tools instead of steel tools—as, nowadays, a diamond, the very hardest of all stones, has to be cut with another diamond or shaped by being rubbed with diamond dust.

The beetle was sacred in Egypt and called a scarab, and numberless scarabs made of clay and stone were made to be suspended from the neck, where they acted as a charm for the wearer. So popular are these charms that they are manufactured to-day in great quantities and sold to travelers as real antiques.

CHAPTER 3

CHERUBS AND KINGS

CAN you speak Assyrian? What's that? "Of course not"? But you know one word of Assyrian, I'm sure, even though you may have forgotten the country. Assyria is an old country as Egypt is, and it's a thousand miles to the east of Egypt. The Assyrian word I think you know is "cherub."

We call an angel head with wings a cherub. Sometimes we call a sweet baby a cherub. But an Assyrian cherub is neither. It's a fairy-tale animal, either a lion or a bull with a man's head and an eagle's wings. In Assyria cherubs used to be made out of alabaster, which I know you remember is a kind of stone, usually white and softer than most of the stone the Egyptians had.

The Egyptian sphinx was a man-headed lion lying down. The Assyrian cherub was a man-headed bull standing up. Here is an Assyrian cherub. Notice its man's head—how carefully and tightly the hair and beard are curled. Even the end of the cherub's tail is curled.

Here is an easy puzzle. What's wrong with this cherub? He has *five* legs! The sculptors knew, of course, that a bull had only four legs, but they made him with five legs so that a person looking at him from the front would see two legs together as if he were standing still, but when looking at him from the side would see the animal walking.



*Courtesy of the Metropolitan
Museum of Art*

ASSYRIAN CHERUB

The next piece of Assyrian sculpture is in low relief. A king is drinking out of a bowl. A servant stands back of him, fanning him with a plume to brush away the flies.

Notice what muscles these men have—how different from the Egyptian men, who were slender, with no muscles showing. The Assyrians



ASSYRIAN KING AND SERVANT

thought that beauty was strength, that any one to be beautiful must be strong, so they showed their kings with big bulging muscles.

The Assyrians believed also that hair as well as muscles was a sign of strength and that no real man who could grow a beard would have a smooth face like a woman. You remember the Bible story of Samson, whose great strength was supposed to be due to his long hair and who, when this was cut off, became weak? You see, the king has long hair and a beard tightly curled like ropes, but the servant has no beard.

That was because the servant was not supposed to be as strong or manly as the king—the king didn't want him to be. Some people who have butlers nowadays make them keep their faces smooth.

Notice that the eye is like the Egyptian—front eye in a side view.

The men had more clothing on—shawls or skirts with tassels which came to their ankles—and they wore half sandals. They were not altogether barefooted.

The two chief things the Assyrian kings liked to do best—their two chief sports—were killing animals and killing people in battle, so most of their reliefs show them doing these things.

But the best things the Assyrian artists made were figures of animals. They made them much more lifelike than those of the Egyptians. In many reliefs the horses are fine spirited steeds and their manes and tails are tightly curled.

The Assyrians also made tiny reliefs on the curved surfaces of spool-shaped pieces of stone or clay. A small axle was put through the spool hole and the spool then became a tiny rolling-pin that could be rolled over any soft surface such as mud or wax and leave a flat imprint of the picture on the spool sides.

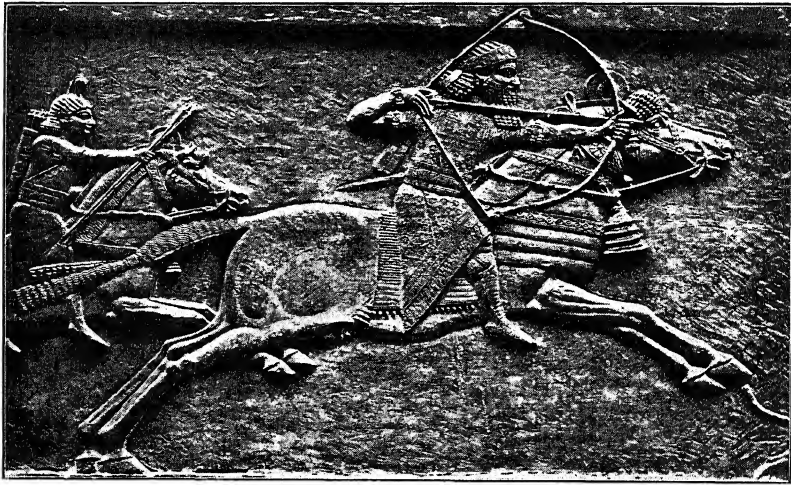
In this way they could make as many of these small reliefs as they pleased. We think, however, they used these seals to sign writing. They did not write on paper, as they had no paper. They wrote on mud bricks before the bricks were dried and they stamped their seal at the end instead of signing their names, as your mother may stamp her initials or crest in sealing wax, with a seal ring, after writing a letter.

These sculptures of the Assyrians have been dug up from the ruins of their old cities, carried away, and placed in museums, so that if you want to see them, you must go not to Assyria but to the British Museum in London, the Louvre in Paris, or to other great museums.

From what I have told you of Assyrian sculpture, how would you describe it in a few words?

Huge beasts called cherubs—with five legs
Strong and powerful men and animals
Hair and beards in rope-like curls
Low reliefs showing hunting and fighting scenes
Very natural looking animals
Small engraved spool-shaped seals

And that's about all we know of Assyrian sculpture dug up from the ruins of their once great cities and carried to the museums of Europe and America. Not much left to tell the tale of the proud, powerful, and cruel tyrants that ruled over millions of people—monarchs and their subjects all dead these thousands of years.



ASSYRIAN KING HUNTING

CHAPTER 4

MARBLES

WHEN I was a boy I once overheard my father talking with a friend about marbles. "You know," said my father, "the Greeks made the finest marbles in the world." And his friend answered, "Yes, there is no doubt that the Greek marbles are the finest in the world."

I wondered why these grown-up men were talking about marbles and I wondered who the Greeks were who made such fine marbles and where I could get some, for I had some very fine marbles myself—moonies and agates. I didn't learn till later that they were not talking about marbles to play with, but about statues that the Greeks made out of marble long before Christ was born. People call them simply marbles instead of marble statues.

Greece *was* a little bit of country in the Mediterranean Sea and still *is* a little bit of country. But the Greeks who *were* and the Greeks who *are now* are not the same.

The old Greeks believed in fairy-tale gods and goddesses and heroes and made up fairy-tale stories about them—mythology, we call it. Then the Greeks made beautiful statues of their gods as they supposed the gods looked and acted, and no one since has been able to make as beautiful sculpture. Sculpture is one of few things that we can't do much better than they did.

The Egyptians usually made their statues of granite, which was too hard. The Assyrians made theirs of alabaster, which was too soft. But the Greeks made theirs of marble, which was just right. One reason

they made such beautiful statues was because they had such beautiful marble to make them of—just the right material.

In Greece there were several places—quarries, we call them—where the finest marble in the world was found. One was a mountain called Pentelicus, another an island called Paros. There is still plenty of marble from Pentelicus and Paros, but there is no Greek or other person now living who can make it into such sculpture as these Greeks who lived two thousand years ago. It takes more than good marble to make a good statue.

But the Greeks did not start off making beautiful statues in the beginning. The first and oldest piece of Greek sculpture we have is of two lions over a stone gateway at a place called Mycenæ.

These lions have lost their heads. But even with the heads they once had, they could not have been any finer than some of the Assyrian lions cut in alabaster.

One of the next oldest pieces of Greek sculpture looks almost like something a child might have done, but that is to be expected, for it was made when Greece was a child. It tells a story, however, very well—the Greeks' story of Perseus and Medusa.

Medusa was a beautiful girl who committed a terrible sin against the Goddess of Wisdom, whose name was Athene. Athene, to punish Medusa, turned her into a horrible looking creature and turned the locks of her hair into snakes that writhed and twisted about her face. So terrible was Medusa's face that any one who looked at her was turned into stone. A young hero named Perseus was dared by an enemy of his to go and cut off Medusa's horrible head. The goddess Athene, who was a friend of Perseus, went with him and led him to Medusa. When he came to the place where Medusa lay asleep, he looked away and cut off her head with one stroke and out sprang a winged horse called Pegasus.

In the picture, Perseus is shown cutting off Medusa's head as he

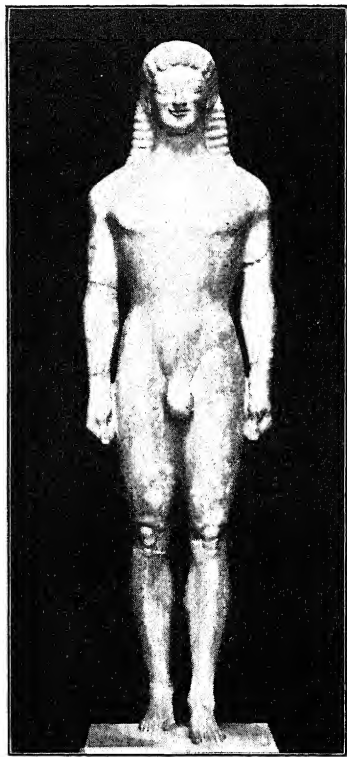


PERSEUS AND MEDUSA

looks away. Medusa clasps Pegasus in her arms. Athene, on the other side, looks more like a man than a girl, and though she is facing front, her foot is twisted sideways in order that it may be inside the picture. Medusa's right leg is longer than the left, for the left leg is very short from the knee up. If you can imagine how she would have looked if she had stood up, then you can see better how much shorter one leg is than the other. Pegasus is a tiny toy horse and his hind legs are like those of a kangaroo—much longer than his front legs.

The Lion Gateway and Perseus are both in high relief, but here is a

statue in the full round that was made later. It is called the Apollo of Tenea. Apollo was the Greek Sun God and was supposed to be the handsomest of all the gods, but this statue of him may not make you think him beautiful.



APOLLO OF TENEA

The Greeks of those days thought the human body the most beautiful thing in the world. They tried to make their own bodies beautiful by physical training—sports and exercises and healthful living—and they made statues of their most famous athletes.

We often say nowadays of some splendid looking athletic fellow, "He is a perfect Apollo." This statue probably is not Apollo at all, but just the figure of an athlete—a runner or a jumper. He is not beefy like the Assyrians or skinny like the Egyptians, but the face has a peculiar expression, the hair is primly crimped, and the eyes seem to bulge. But this is one of the first statues we have that seems to be smiling. Perhaps the man has just won a race.

This early or "archaic" sculpture, as it is called, is interesting, but from now on the Greek statues are not only interesting but really beautiful.

CHAPTER 5

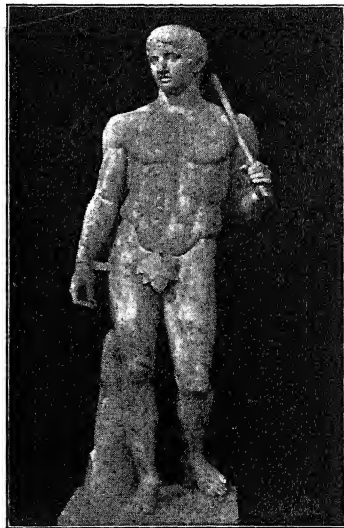
STANDING NATURALLY

WHEN I used to recite poetry at school assemblies, I stood like an Egyptian statue of Rameses—hands straight down at my sides and feet close together, flat on the floor.

“Stiff as a poker,” my teacher used to say. “Can’t you take a more natural, an easier position? Put one foot back of the other!”

So I stood like the wooden statue of the Schoolmaster of Boulac, but still with both feet flat on the floor. That was the best that I could do to be natural and that seemed the best that sculptors were able to do with their standing statues, until along came a Greek named Polyclitus (Pol-ly-cly’tus). Polyclitus made a statue of an athlete carrying a spear over his shoulder, and it was the first time a statue had been made in an easy, natural standing position, with the weight resting on one leg, one foot behind the other and *not* flat on the ground.

The Greeks called the Spear Bearer the perfectly proportioned man, the ideal figure, and other sculptors used this statue as a pattern and copied its proportions in the statues they made.



Courtesy of The University Prints

THE SPEAR BEARER

COPIED FROM POLYCLITUS

Indeed, live athletes tried, with exercises, to make their own chests and legs and arms the same size as those of the Spear Bearer.

Polyclitus also made a statue of a woman athlete. It was called the Amazon. The Amazons were supposed to be a tribe of warlike women who had nothing to do with men—except to fight men in battle and even in duels!

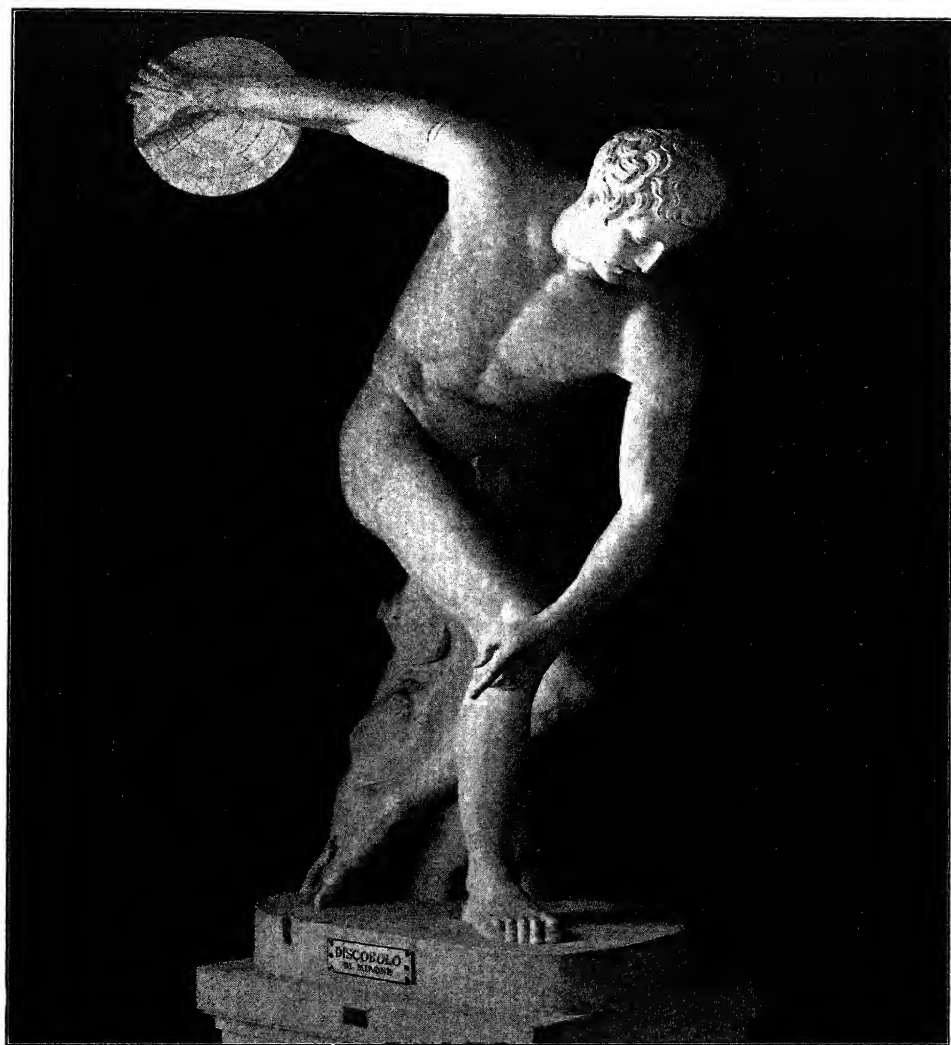
Girls nowadays may not consider the figure of the Amazon beautiful. They may think it is too muscular for a woman. But fashions change. I remember when it was the style for women to have very small waists and they wore tight corsets, but the old Greek style came back and now most girls are too sensible to wear corsets at all.

Other sculptors admired these two statues and made copies of them in marble. It is fortunate for us they did so, for all we have now are the copies. The ones that Polyclitus himself made have disappeared and no trace of them is left. What became of them no one knows.

Polyclitus made his statues of a metal called bronze. The first metal ever discovered was not gold or silver or iron, but copper. Then tin was found; and tin and copper combined made bronze. So bronze is not a pure metal. It is a combination of copper and tin. Bronze lasts if kept dry, but when it is exposed to the weather or dampness, it is gradually eaten away. This metal could be worked so well that the Greeks loved to make statues and other things of it. It does not rust like iron, it is not expensive like gold or silver, and as it grows older it turns a rich brown or greenish color and in the course of time acquires a coating called a *patina*.

I have an ancient lamp made of bronze with a beautiful patina which it perhaps took two thousand years to get. Some people try to imitate the real patina by treating bronze with acid, but only nature and time can make the real patina.

Another Greek sculptor, a friend of Polyclitus, was named Myron. Myron went farther than Polyclitus in giving naturalness and action



THE DISCUS THROWER

COPIED FROM MYRON

to his figures. One of his statues was the Discus Thrower. The discus was a heavy disk and discus throwing was a sport in which the object was to see how far the discus could be hurled—underhanded as in bowling, not overhanded as in throwing a ball. It wasn't rolled along the ground, but was hurled into the air.

The Discus Thrower is shown just at the moment before the discus is to be hurled from his hand. Notice the toes of the front foot gripping the ground, those of the rear foot being drawn along the ground to balance the body. The discus weighed about two and a half pounds and the record throw was less than a hundred feet, which may not seem very far until you try it. Nowadays, the discus has been thrown a hundred and fifty-five feet, by a person swinging his body around in circles before letting the discus fly.

This statue was first made in bronze, but the bronze has disappeared and the picture shown here was made from a copy in marble. It is one of several copies in marble in European museums.

Myron also made a bronze cow which was so natural that it is said to have fooled everybody into thinking it a real cow. But this cow, too, has disappeared and there are not even copies left.

Bronze statues were entirely eaten away in the course of time. Marble statues often were broken but otherwise they lasted.

CHAPTER 6

THE GREATEST GREEK SCULPTOR

ORDINARY men we call "Mr."—*Mr. Smith; Mr. Jones.* Great men we call by their full names without the "Mr."—George Washington for instance. But the greatest men of all we call just by their last names. People have made lists of the hundred greatest men of all time—the greatest ruler, the greatest writer, the greatest painter, the greatest sculptor, but probably you have never heard of the greatest sculptor. He was a Greek. His name was Phidias—no first name, no middle name—just Phidias.

Polyclitus and Myron made statues of men and women. Phidias made statues of gods and goddesses and god-like men and women. In Athens there is a huge, high rock called the Acropolis, which means the Upper City, and on this rock the old Greeks built a beautiful temple called the Parthenon. It was built just to hold a magnificent statue of Athene, the Goddess of Wisdom, who the Athenians believed watched over them and their city as a mother watches over her children, and gave them many useful things.

Phidias was chosen to make this statue of the goddess. Cold marble was not good enough material, so Phidias made the statue of gold and ivory, and he made it seven times as high as a human being. His Athene stood erect in a sleeveless robe that reached to the ground. On her bosom was a breastplate with a border of serpents because serpents were supposed to be the wisest of creatures. In the center of the breastplate was the head of Medusa. (You remember I told you that Athene helped Perseus to cut that head off.) Around the head of Medusa, be-

tween the serpents and the head, was shown a battle between the Amazons and the Greeks. Athene wore a helmet. On top of this helmet was a sphinx and on each side of the sphinx were winged horses. Athene's left arm rested on a shield and carried a lance around which coiled another serpent. In her right hand Athene held a statue of Victory, who faced her and offered her a wreath of gold. The statue of Victory was about six feet high, so you see how big the statue of Athene herself must have been.

This statue of Athene has entirely disappeared, probably stolen piece by piece for its gold and ivory. We know what it looked like only by a small, probably very poor, copy that was made of it and judging by the copy we have, we cannot quite agree that the statue was as beautiful as the old Greeks thought it.

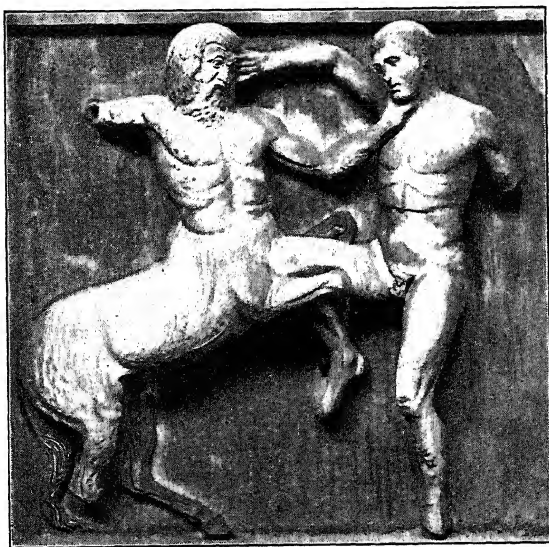
This statue, as I told you, was on the inside of the Parthenon. All around the four outside walls of the temple, high up near the roof, was a band or strip called a frieze, of sculptured figures in low relief. This frieze was almost a tenth of a mile long and showed in marble a parade or grand procession that took place in Athens once every four years. The object of the procession was to bear a gift of a golden veil made by the virgins of Athens for their goddess, and it was carried with great pomp and glory and ceremony to the temple. All Athenians—men, women, and children—took part in the procession. There were horsemen with their horses. There were animals to be sacrificed. There were girls and boys bearing gifts; there were musicians and singers.

The sculptured picture of the procession starts at one end of the Parthenon and proceeds along both sides of the temple to the other end, where the entrance is. It is the most perfect relief work that we know anything about and though there are hundreds of figures of men, women, and animals, Phidias planned it all and with his pupils made it all. There is a tenth of a mile of it, and yet there is not a rough or unfinished part in the whole.

When the relief was in its place on the Parthenon wall, it could just

barely be seen, it was so high up and closed in by the portico of columns that surrounded the whole. That it might be seen better, the background and the figures were painted. But nothing except perfect work, whether it could be seen or not, was good enough for the temple of this goddess of the Athenians and even the parts that never could be seen were finished perfectly.

Above and between the columns which were around these walls were separate groups of figures in high relief illustrating battles, most of them between gods and fairy-tale animals called centaurs. A centaur



FIGHTING CENTAUR
METOPE FROM THE PARTHENON

had the body of a horse and the head and trunk of a man. There were ninety-two groups of these spaces, or *metopes*, and there is not one of these metope sculptures that is not now broken! An arm or a leg is off, a nose is broken, an ear or an eye is missing. So you have to use your

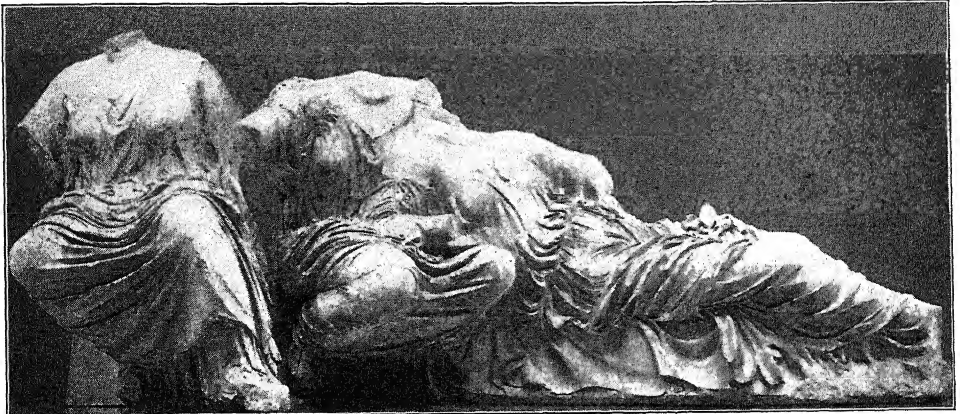
imagination, if you have any, to understand what the figure looked like when it was perfect. If you have no imagination, you probably will exclaim, "What! You call that beautiful?"

At each end of the Parthenon there is a large triangular space made by the sloping roof and in these two triangular spaces were groups of superb, heroic size figures of gods and goddesses. Heroic size means hero size—that is, bigger than real life. They are in the full round. That is, they stand free from the back. But, unfortunately again, little is left. The group in one triangular end represented the birth of Athene.

Athene was not born as a tiny baby, but full grown and fully armed, and she came from the brain of the king of the gods—that is why she was so wise. Zeus, the chief of the gods, was in the center of this group. Vulcan, the blacksmith god, had just struck him on the head with his hammer, and according to the story, Athene in full armor sprang out of his head. On each side of this central group, the other gods and goddesses are looking on. Some are standing, some are sitting, some are lying down. The groups were planned to fit the triangular spaces. Of the statues remaining, one is Theseus, taken from the left corner, and the so-called Three Fates, from the right corner. The Three Fates are a good test of your imagination, for they have no heads, hands, or feet. Can you imagine what they once looked like?

Lord Elgin, an English nobleman, saw these sculptures many years ago and thought them so beautiful that he wanted his country to have them. In the position in which the frieze was placed on the Parthenon, they could not be seen properly and they were gradually being destroyed, for there seemed to be no one interested enough to take any care of them. So he bought most of them for what amounted to one third of a million dollars and took them to England, where they were put in the British Museum. They are known now as the Elgin marbles.

But the greatest of all the sculpture that Phidias made was not in Athens. It was in a temple at Olympia. For this temple he made a



Courtesy of The University Prints
THE THREE FATES

FROM THE PARTHENON

statue of Zeus. It too was made of gold and ivory, and it too has disappeared. A single lock of the statue's "hair" is said to have been worth a thousand dollars. This statue of Zeus was so famous that every Greek hoped to see it before he died and it was called one of the Seven Wonders of the World. Phidias, when he had completed it, prayed Zeus to show in some way if he liked the statue of himself. Whereupon a thunderbolt shot down from the blue sky overhead and fell at the sculptor's feet!

But the great Phidias, after all he had done, was put in prison. You'd never guess why! Just because he had cut a picture of himself on the shield of the Athene in the Parthenon. This, to the Athenians, was a terrible crime. A mortal to put a picture of himself on the shield of their goddess! And so in prison Phidias died. What an end for the greatest sculptor that ever lived!

CHAPTER 7

AFTER PHIDIAS

HAVE you a Greek nose? Do you know what a Greek nose is? It's a nose which forms a straight line from the forehead as seen from the side. Look at the people around you and see if any have Greek noses. Very few do have them nowadays and not all of the old Greeks had them, either, but the Greek sculptors thought this kind of nose the most beautiful and so they made Greek noses on their statues. Here is a statue that shows a perfect Greek nose. It is a statue of the messenger of the gods, whose name was Hermes.

This statue is of a strong and athletic youth. He is holding in his arms a little boy whom Zeus had given him to take care of. Hermes looks thoughtful as he tenderly holds the baby, and you can almost imagine the baby is reaching up to pull Hermes's curly hair. What he really was reaching for was a bunch of grapes which Hermes held in his hand as a father nowadays might dangle his watch. This statue has lost parts of its arms and legs, but the head and body are still perfect and probably no broken piece of sculpture in the world is more charming or more beautiful than this. It was made by a Greek sculptor named Praxiteles (Prax-it'el-lees) and if he had made nothing else or done nothing else in his life, this one statue was great enough to make him famous through the ages.

Praxiteles is supposed to have made several other statues—one, a faun which gave the title to a book by Nathaniel Hawthorne—"The Marble Faun"—but we are not sure that there are any other sculptures in existence that he himself made.



HERMES

PRAXITELES

Perhaps the best known of all statues in the world is one of Venus, the Goddess of Love and Beauty, which was found on the Greek Island of Melos and so is called the Venus of Melos—or, sometimes, Venus de Milo. She too has a perfect Greek nose, though we can't see it in the front view. We do not know who the sculptor was, but some people now think that one of the pupils of Praxiteles must have made it. This Venus has no arms, but a great many people have tried to imagine what the arms were doing when she did have them. Some say that she was holding a bronze shield on her knee and looking

into its brightly polished surface to see herself. People had no glass mirrors at that time. Their mirrors were made of shiny metal. Others say she held a lance or something else or nothing at all, but no one is sure.

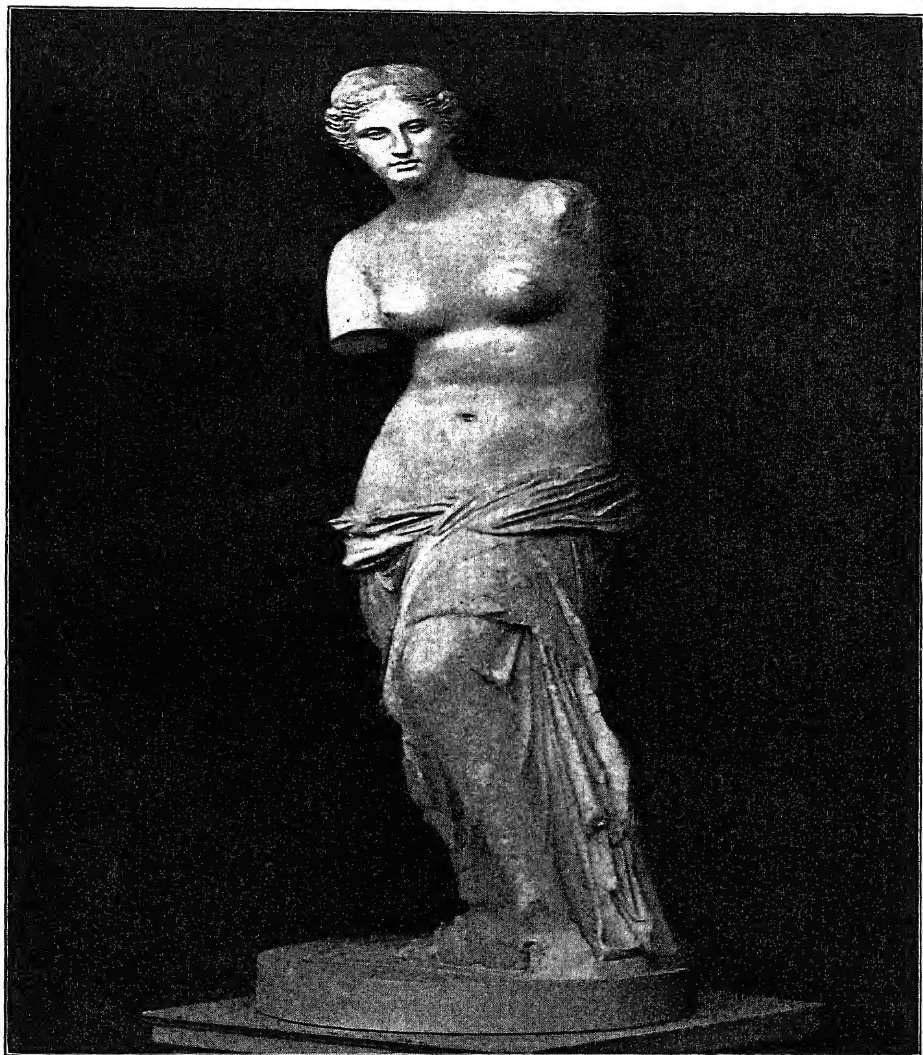
The Venus was discovered not so many years ago, just by accident. A man happened to pass by a lime kiln on the island one day and the Venus was lying on the ground near the lime kiln. A lime kiln is a kind of furnace where stone is burned to turn it into lime. The Greek owner of the lime kiln, like a good many people nowadays, saw no beauty in the old broken statue and was about to break it up and put it in the furnace to make it into lime. The man who happened by just in the nick of time *did* know how valuable the statue was and he bought it for just so much broken marble. After some time, France bought it and placed it in the Louvre in Paris. It is one of that great museum's chief treasures and could not be bought for a fortune—not for any sum of money whatever.

Praxiteles had a friend named Scopas who also was a sculptor, but he liked to make statues that showed people suffering. There are several statues showing Niobe and her children which Scopas may have done, for the statues are the kind he did—they show suffering. But some believe Praxiteles did them. Others think they were done by the pupils of one of these two sculptors.

The Greek story of Niobe is this:

Niobe was the mother of fourteen children—seven boys and seven girls—of whom she was very proud. But she made the mistake of boasting of them to a goddess who had only two children. That was considered sacrilege and the goddess was jealous, so, as a punishment, all of Niobe's children were killed before her eyes. Niobe, with her arms about her youngest child, is shown trying to shield her from the arrows of the gods. As her last child was killed, the gods, as a great favor, turned Niobe into stone so that she wouldn't suffer any more.

One of the pupils of Scopas is supposed to have made another very



VENUS DE MILO



THE WINGED VICTORY

famous statue which we call the Winged Victory, or the Victory of Samothrace because it was found on the Greek island of Samothrace. The statue was made to celebrate a victory of the Greeks on the water. The statue shows the Goddess of Victory standing on the prow of a boat, the wind blowing back her robe. Though she has neither head nor arms, you can, without half trying, see in your mind's eye how she must have looked as she stood triumphantly erect, blowing a trumpet and facing the sea breeze.

You may ask or wonder why some one has not repaired this Greek statue and others. That is, put on a new head or arms. As a matter of fact, many sculptors have tried to do so. Of course they were not allowed to experiment on the original statue, but they made copies and added the missing parts as they supposed those parts must have been. It may seem strange, but every such restoration, as it is called, has been so unsatisfactory, so ugly even, that every one prefers the broken statue instead of a restored one.

I know a little girl who always puts her hand over the illustrations in a book that she loves to read, "Because," says she, "the picture I see in my mind is so much better than the picture in the book, that I don't want the picture I have in my mind spoiled!" Can you picture in your mind how the Victory or the Venus once looked?

CHAPTER 8

PLASTER CASTS

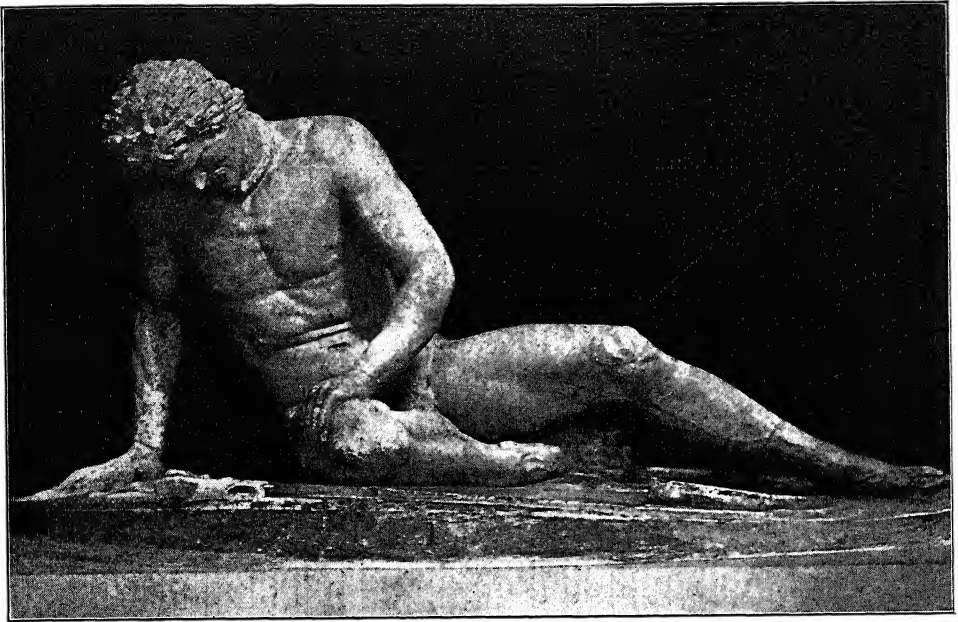
WHEN I was a boy I used to be taken to a museum which had copies of all the great Greek sculptures, made out of plaster—plaster casts, they are called. The statues that I liked best of all, I learned afterward, were not considered so good as those I've told you about in the last chapter. That seems to be the way with boys. They like certain things when they are boys, and different things when they grow up. My special favorite was a statue which the label called "The Dying Gladiator."

"What is a gladiator?" I asked.

A gladiator, I was told, was a swordsman, and gladiators were prisoners or slaves who were made to fight each other until one or the other died—just for the amusement of a crowd of people who gathered in a field surrounded with seats, like a football stadium, to watch the sport.

I didn't learn till later that the label on the statue was wrong, that it should have been "The Dying Gaul" and not "The Dying Gladiator." The Gauls were a barbaric people who lived in the country that is now France. The Gauls fought the Greeks and this Gaul was killed in battle. He wore a twisted collar around his neck—a *torque*, it was called. That's how we know he was a Gaul, for Gauls wore this particular kind of collar.

This statue showed the wound in the man's side, made by the sword, and the stony blood flowing from it. There was a card on the statue, "Don't Touch," but I could hardly keep from touching the sword



THE DYING GAUL

wound from which the blood flowed. It seemed so very natural.

"Come away," said my mother. "It's dreadful—a man dying. Let's look at the Apollo Belvedere. This is one of the most beautiful statues of a man ever made."

"Is that a man?" I exclaimed. "He looks like a woman."

"That's just because he has long hair and it is put up on the top of his head in the way many Greek men wore their hair."

Apollo, as I've told you, was the Sun God and the handsomest of all the Greek gods. We don't know what he is supposed to be doing in this statue. Some say he was holding a bow in his left hand and had just pulled the bowstring with his right hand and shot a dreadful dragon-like serpent called a Python that killed every one who came near him. Others say Apollo was holding the head of Medusa in his

left hand, to turn his enemy into stone. Apollo, Minerva, and Perseus all had copies of Medusa's head to kill their enemies with.

"Belvedere" means "beautiful to see," but the Apollo is called Belvedere not because he was beautiful to see but because the room in



THE APOLLO BELVEDERE

which the statue stands now in the Vatican Museum in Rome is called the Belvedere Room.

But I was more interested in the statues that told a story, especially if the story seemed to be something terrible. There was a big statue of three men caught in the coils of two huge serpents. The sign on it said, "Laocoön and His Two Sons." Laocoön (Lay-ock'o-on) was a Trojan priest who told his people that the Greeks were putting over a trick on them. Just then two huge snakes attacked Laocoön's sons. He went to save them and all three were killed by the serpents. The people

believed this was a sign that Laocoön was not telling the truth about their enemy, though it afterward turned out—too late—that he was right. Not *one* but *three* sculptors are said to have made this statue.

Why is it that some people, especially boys, like to see pictures and



Courtesy of The University Prints

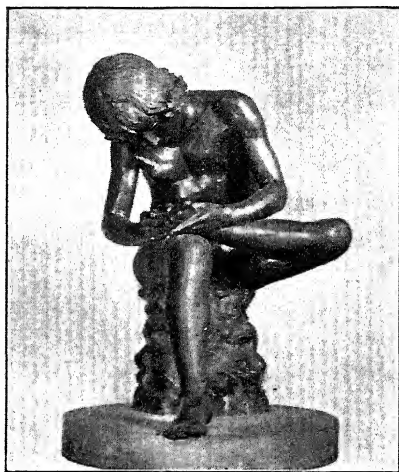
LAOCOÖN

statues of suffering and dying? I used to, but now I wouldn't have a picture or a statue of such a thing in my house. It is too unpleasant to have around. But in olden times many people were bloodthirsty and loved to see killings, and statues of killing and suffering. They went to fights and took their luncheons along to eat while they watched and gloated over the fighting and especially over fights that ended in death. There are still people who like to see bull-fights and to visit slaughter-houses.

But there was one little statue I've always liked. It is not the statue

of a god or a mythical person—not even of a grown-up. It is of a boy pulling a thorn out of his bare foot, and it shows us that boys who go bare-footed nowadays are very much like boys who went bare-footed two thousand years ago.

One other statue, made just before Christ was born, was so huge that there was no plaster cast of it. It was a bronze giant statue of the Sun God, about one hundred feet high, and was so placed that the god's legs straddled the entrance to a harbor in the island of Rhodes and ships went in and out of the harbor between the legs. It was called the Colossus of Rhodes. It was one of the Seven Wonders of the World. For some reason, perhaps in an earthquake, the Colossus fell and the broken pieces were sold for junk.



Courtesy of The University Prints

BOY WITH THORN

CHAPTER 9

TINY TREASURES

“**W**HERE your treasure is, there will your heart be also.” I once read a description of a group of sculptured figures that had been made for a public building. The chief thing the newspaper said about the sculpture was that it weighed ten tons. It did not say whether the statues were beautiful or not—just that they weighed ten tons. It might have been ten tons of coal. But mere size doesn’t make a thing beautiful. The Greeks made some huge statues, but they were beautiful. They made, also, tiny sculptured figures so small that you have to look at them under a magnifying glass to see how really beautiful they are.

Not long ago I saw in a museum a piece of such sculpture that couldn’t have weighed more than an ounce and was no larger than a domino. It was a piece of colored stone through which the light shone and it was carved with beautiful figures of Greek gods and goddesses in low relief. The figures had been cut into the stone with very fine but sharp tools. It had been made by some Greek sculptor whose name no one knows—before Christ was born. It was called a gem, which is the name we give to anything that is very precious though it may be tiny.

In the British Museum in London is a whole room of such gems made before the time of Christ, by sculptors as great as those who made man size and colossal size figures. These gems were made for kings and wealthy people, for no others could afford them. Rich people long ago used to collect such gems as you might collect postage stamps, and museums—and some people who can afford it—do so to-day.

Often these tiny bits of low relief sculpture were cut in a stone that had two or three layers of different colors so that the figures were in one color and the background in another. If one layer was black and the other white, the stone was called onyx. If the top layer was reddish and those below it white and black, it was called sardonyx. Such sculptured low reliefs were known as cameos and some were very beautiful. Nowadays, cameos are made of shells of two color layers and are called shell cameos. Some are cut from two or more layers of different colored stone cemented together or from artificial sardonyx.

It used to be the fashion for ladies to wear shell cameos as breast-pins and perhaps your grandmother may have had such a cameo pin with the head of some one cut in it. Some kinds of china have white cameo-like figures on a blue background. Some cameos were cut from glass of two colors. There is a famous vase in the British Museum called the Portland Vase. It is of blue glass and the figures on it in relief are white glass. Many years ago a crazy person, just to show off, knocked over the vase and it was smashed to bits. The bits were all picked up and put together again, and so well was it repaired that you can hardly tell that it was broken.

There was another kind of gem made in great quantities, before Christ, in which the figures were hollowed out or sunken, instead of being raised. A gem of this sort was called a seal or intaglio, which means sunken. The seals were used to stamp a design in wax. Of course the stamped impression made from the sunken relief was raised in wax, and one could make as many stamped impressions with the seal as he liked. Each person who could afford it had such a seal with a special design all his own to stamp everything he wished to mark with his own hand. Every one would then know he alone had made the impression.

The marks made by seals were largely used instead of signatures, back in the days when few people knew how to write—or even how to sign their names. Sometimes the seal was fitted in a finger ring which



SOME ROMAN CAMEOS

was worn by the owner so that no one else could use it. Such rings were called signet rings, which means "signing ring." Sometimes the seal was not mounted in a ring, but was kept in a safe place so that no one but the owner could use it.

Have you ever collected old coins, old metal money of bronze or silver? Most boys have. Perhaps you would never think of such coins as a kind of sculpture, but that is what old coins are—pieces of low relief sculpture, and the Greeks used to make the most beautiful coins with heads or figures of famous people or gods on them in low relief. First they made a die which was a sunken relief, and then, with this die, coins were stamped out of metal—gold, silver or bronze. One difference between a coin and a gem is that a coin is made from a die and any number of coins all alike can be made from the one die, but there is only one of a gem. The coins of some countries to-day are really beautiful, but none quite so beautiful as those the old Greeks made. One reason for this is that our coins have to be made quite flat, in very low relief, so that they will stack in a pile, for this is necessary in our banks. But it was not necessary to stack the old Greek coins in piles and so they could be made, and were made, in higher relief.

Coins were, of course, used to buy things with, but there were old coin-like sculptures called medals that generally were larger and were not used as money. The figures on medals were often in higher relief and made by pouring the metal into a mold instead of by stamping the metal with a die. Usually such medals were made for prizes in athletic games or honors in war or to celebrate some great event, anniversary, or celebration. Medals of this kind are made to-day, so your father may have one to show you.

CHAPTER 10

BAKED EARTH SCULPTURE

TERRA COTTA means earth baked. A flower pot and a brick are terra cotta—that is, earth or clay baked till it is red, yellowish red. You have probably made things out of mud—oranges and apples, cups and saucers—and the old Greeks made figures of people in the same way and out of the same thing, mud or clay. They made little statues of women, smaller than doll babies, out of clay, and then baked them so that they would not crumble to pieces. That baking turned them into terra cotta.

It was the custom to place these little figures or little statues—figurines and statuettes, they were called—in tombs and graves and thousands of them have been dug up and are now in museums. As they were first dug up in a town in Greece named Tanagra, all such statuettes are called Tanagra figurines. They are usually figures of ladies carrying a fan or a parasol. Yes, the Greek ladies had fans and parasols very like the ones ladies have nowadays. What is unusual in Greek sculpture is that the figures are fully clothed.

Most of the statuettes are original, but some of them are copies of large statues. As many of the large statues have disappeared, these figurine copies show us what the originals looked like. But they show us more than that. If you want to find out what the Greeks really were like, go to a museum and look at these little figures. The big, famous marble statues are of gods and goddesses, athletes and warriors. They were more nearly perfect than real people. But these terra cotta statuettes are copied from everyday Greeks. They show



Courtesy of Pratt Institute

TANAGRA FIGURINES

us what the real Greeks were like. One shows a girl milking a cow. Another shows two girls playing a game, with one riding on the back of the other. Just everyday doings.

Many of the figurines were painted in bright colors. Some had tiny necklaces of real gold or held bronze ornaments in their hands. But on many of them the only color left is the yellowish red of the clay of which they are formed.

The figurines are hollow except for their heads, which are solid

clay. I'm sure *your* head has more in it than solid clay, no matter how hollow the rest of you may feel just before dinner time.

Figurines were made for the dead, lamps were made for the living. Lamps, which every house had to have, were decorated with figures in low relief. Lamps nowadays, of course, are usually electric and quite different from those in ancient Greece and other countries. These old lamps were very small, seldom larger than your hand, and were made either of terra cotta or bronze. They had a hole in which a twisted piece of stringlike cloth was stuffed for a wick. They held olive oil or grease which soaked the wick and made it burn when lighted. These lamps gave no more light than a burning match, but that was all the light people had at night. Perhaps they went to bed earlier than we do. The lamps often had on the top or sides the usual fairy-tale figures—Greek gods or goddesses or other characters in Greek mythology.

Lamps were made in molds and hundreds or even thousands of lamps were made from one mold. Some of the old molds have been dug up out of the ground and are used to make modern reproductions which are sold to-day as souvenirs to travelers or even called antiques. If the lamps are of bronze and are really old ones that have been dug up, they have a greenish coating called a patina. If they are not really old, they are sometimes dipped in acid to make them look so, but they have sharper edges than the old and the patina made by acid does not look the same as that eaten in by time. If they are of clay, the newly made lamps look cleaner cut and fresher than the old. So if you are thinking of buying an ancient lamp to-morrow (stranger things *have* happened), be sure to notice the patina or the freshness of the clay.

CHAPTER 11

BUSTS AND RELIEFS

HAS your mother or your father or your teacher ever told you not to say "bust"? "If he gets any fatter, he'll bust!" is very poor English. I agree with your mother or your father or your teacher. What you should say is *burst*.

But now I'm going to tell you how you can use the word "bust" so your mother and your father and your teacher will like to hear you use it. In bad English, "bust" means "burst." In good English, "bust" means a piece of sculpture showing the upper part of a person—sometimes just the head and neck and sometimes the head, neck, shoulders, and chest. A bust that is made to look like one particular person so that you can say when you see it, "Why that looks just like Mr. Brown," or "just like Alice Jones," or "just like Tommy Smith," is called a portrait bust.

The ancient Egyptians made some very good portrait busts, but the people who made them best were the ancient Romans. The old Roman busts are so lifelike that they look like real people you might see walking down the street to-day. The Greeks put Greek noses on most of their statues even though many Greeks didn't have Greek noses. But the Romans liked to make their busts just like the real person. If a man had a crooked nose or a double chin, the sculptor made that man's bust with a crooked nose or double chin. If the man had a worried look, the sculptor made the bust with the worried look.

Each Roman family that could afford it had busts made of all the members of the family. These busts were handed down in the family

so that an old family had a great many busts of its ancestors around the house. Whenever there was a death in the family, all the family portrait busts were carried down the street in the funeral procession. If you had watched one of those processions, you could have seen, perhaps, how much a grandson looked like the bust of his grandfather which he was carrying.

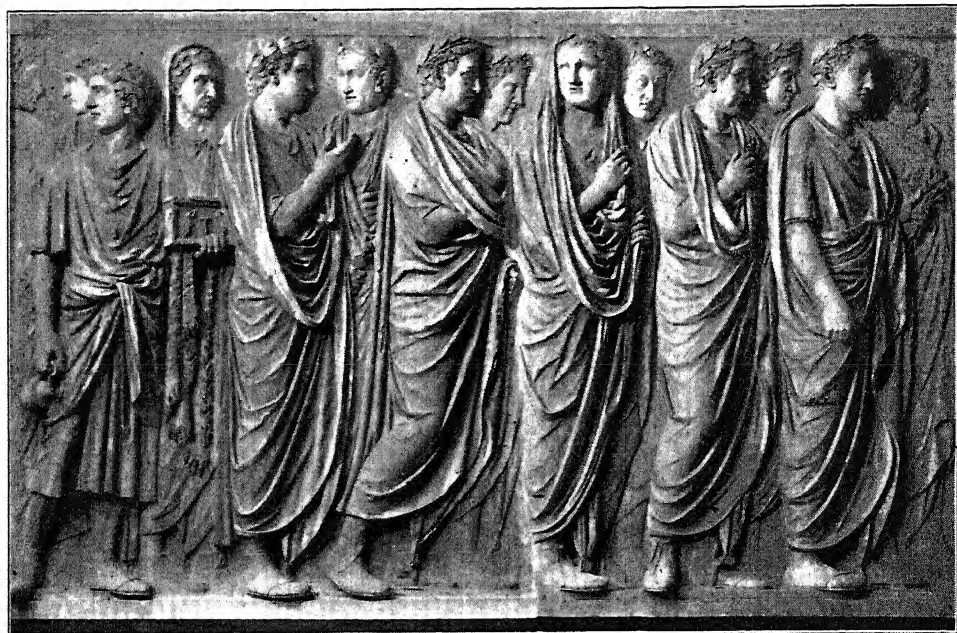
Each Roman emperor had hundreds of busts made of himself to be sent to all the important cities in the Roman Empire. Here is a bust of Julius Cæsar. Does he look like any one you know? Now if you want to use the word *bust*, go ahead.

Except for the busts, the Romans weren't very good at making statues in the round. So when they conquered Greece they brought back to Rome all the famous Greek statues they could find. They brought back Greek sculptors, too, and made them carve statues in Rome. Many of the statues made in Rome were not original but were copies of famous Greek statues. It's lucky for us the copies were made, because so many of the great Greek statues were lost that if we hadn't been able to dig up Roman copies of them we shouldn't know at all what they were like. You remember Myron's Discus Thrower? The statue that Myron himself made disappeared and has never been found, but several Roman copies of it were made and so we know what it was like.

Although the Romans weren't so good as the Greeks in making statues in the round, they did make some excellent bas reliefs. All boys like the reliefs showing the campaigns of the Emperor Trajan.



Courtesy of Pratt Institute
JULIUS CÆSAR



Courtesy of The University Prints

RELIEF FROM THE ALTAR OF PEACE

They show the Roman soldiers marching, camping, fighting, taking a city, capturing prisoners, and carrying off the spoils of war. Trajan's campaign was carved on a marble column and the sculptured band winds like a corkscrew round and round the column from the bottom to the top. The column is still standing in Rome and is called Trajan's Column.

Another famous relief is carved on the Altar of the Peace of Augustus which the Roman Senate ordered erected in 13 B.C. when the Emperor Augustus came back from putting down revolts in the western part of the Roman Empire.

If any one should ask you what kind of sculpture the Romans did best, just tell them, "Reliefs and busts."

CHAPTER 12

STORIES IN STONES

WHAT would you call men who went about with hammers and broke all the statues they could find, and who even went into churches and broke the statues there? Probably you would say they were bad men or crazy and should be locked up.

You would be right, and they would be locked up nowadays. But long ago (about 800 A.D.) such men were not bad or crazy, and no one tried to lock them up. They broke statues because they thought statues were too much like idols. They thought a church especially should have nothing like an idol or an image in it. An image is called in Greek an *icon* and these men were called *iconoclasts*, which means image smashers. They smashed a great many statues, and the poor sculptors had to move away from the cities where the iconoclasts were if they still wanted to make statues.

However, the iconoclasts didn't seem to mind small sculptures in relief. And so in the time of the iconoclasts and for many years afterward many beautiful bas-reliefs in ivory, silver, and gold were made. The carvings in ivory were used as the covers of books, writing tablets, and little boxes. The place to see them now is in museums where they are kept carefully in glass cases. When you look at them, remember the iconoclasts and why there were no good statues in the full round for a long time after the Romans.

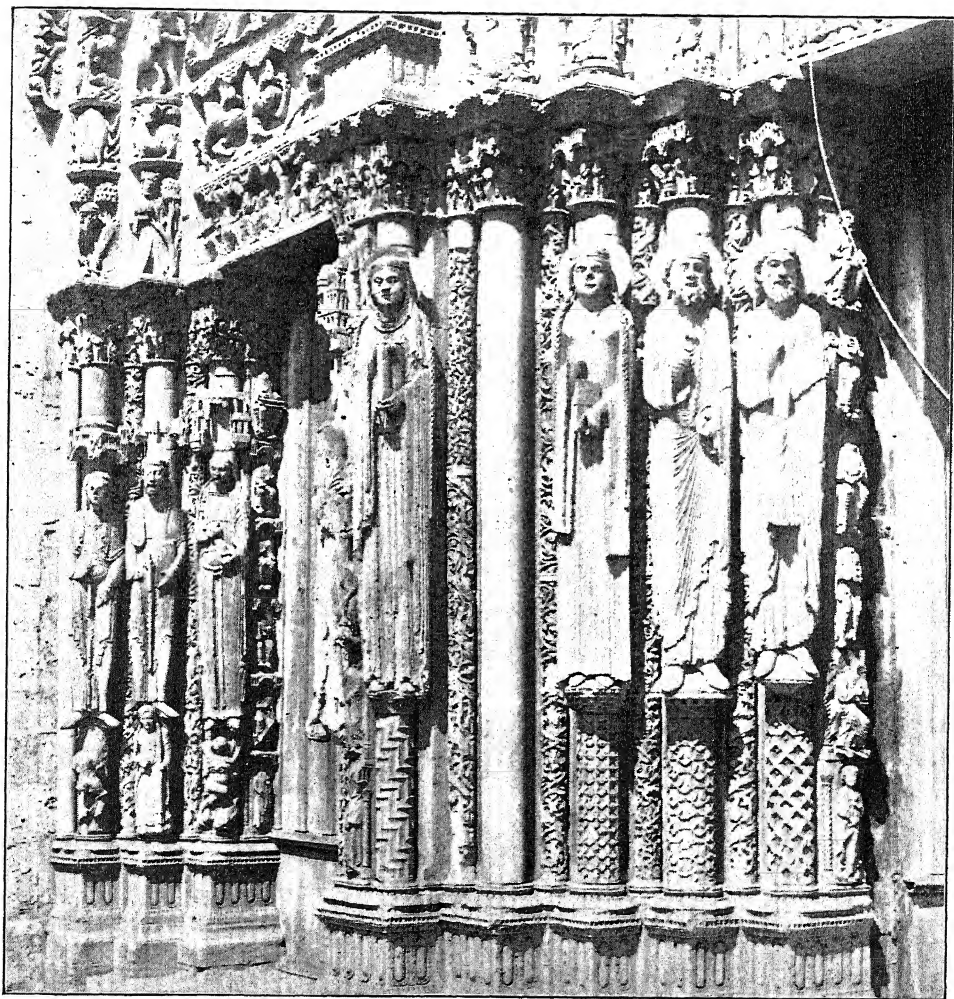
Some sculptors had to leave Byzantium—the old name for Constantinople which was the old name for Istanbul—because of the iconoclasts. They traveled to France and carried on their work there.

And it is to France that we turn for our next great statues. They belong to the Middle Ages, several hundred years after the iconoclasts. And, strangely enough, these statues were all carved for churches—just what the iconoclasts didn't want! In fact, the churches were simply covered with statues, which were made of the same kind of stone as the buildings and not of marble like the Greek and Roman statues. These statues were really part of the churches. The cathedral at Chartres, in France, has not less than ten thousand figures of men and animals on it. They are everywhere—over the doorways, on the columns, on the roof, under the windows, on the walls. Even the waterspouts are carved in the forms of queer animals.

Most of the people of the Middle Ages could neither read nor write, so all these sculptures on the churches took the place of books. They told the people stories of the Bible and of the saints. You see they were useful as well as ornamental.

They are called Gothic figures because churches and cathedrals of the Middle Ages were built in the Gothic style. The Gothic figures on a cathedral are of almost every kind of living thing you could think of. There are scenes from the Bible, statues of saints, carvings of animals and flowers, pictures in stone of the seasons, of different kinds of work like farming and writing, wood chopping and fighting. There are figures of men and women, of actual creatures and of strange unheard-of make-believe creatures. And each of these figures was made for that particular part of the cathedral where it was placed. The statues were not stuck on after the cathedral was built. They were a part of it, built into it, and made of the same stone.

Do you remember when you had a sore throat and had to gargle? On the Gothic churches there are statues that gargle. They don't have sore throats, of course, but they gargle every time it rains. They are rain spouts and have holes in them so water can run out through their mouths. Like the statues that told the stories of the Bible, they are



Courtesy of Pratt Institute

GOTHIC FIGURES ON CHARTRES CATHEDRAL

useful as well as ornamental. We call them *gargoyles*, which is another way of saying they gargle.

The gargoyles were carved in the shapes of the queerest animals you can think of. Some have heads like monkeys, some have three heads, some have their tongues sticking out as if they were making faces. Some have claws like eagles, others hands like men.

The queer animals that weren't made to gargle are called grotesques. Most of them are up near the roof like the gargoyles and seem to be looking down and laughing at the people on the ground. The sculptors on the old cathedrals must have enjoyed carving their grotesques and gargoyles.



GROTESQUE ON CATHEDRAL OF NOTRE
DAME IN PARIS

CHAPTER 13

THE GATES OF PARADISE

THIS story begins with a competition. Not a competition to see who could run fastest, not a competition to see who could whistle loudest, but a much harder one. It was such a hard competition that each man in it was given a year in which to try to win.

It was a competition in sculpture. It began this way: In Florence, Italy, there is a little eight-sided building called the Baptistery. A baptistery is a place where babies, or even grown-ups, are baptized. This building has four doorways in it and one of these doorways at the time of the competition had a very beautiful pair of bronze doors with reliefs on them made by the sculptor Andrea Pisano. Long after Andrea Pisano's death the men of Florence decided there should be another pair of bronze doors for one of the other doorways.

There were several good sculptors living then and the men of Florence could not decide who was the best one to make the new doors, and so they had the competition. These were the rules:

Each sculptor had to make a relief in bronze to go on a door.

The relief had to be about Abraham and Isaac.

Each sculptor could have a year for the work and then a group of thirty-four judges would decide the winner and the winner would make the doors.

All the sculptors set to work. All, except one, very carefully kept every one else from seeing their work until the year was up. This one was named Lorenzo Ghiberti (Gee-bear'tee), and he worked and

worked and then he asked his friends to come in and tell him how he could make his relief better. Then he worked some more until he had a very beautiful relief indeed.

When the year was up each sculptor brought his relief to the judges. And what do you think? The judges couldn't decide which was the very best! There was a tie for first place. One of the winners was Ghiberti's relief. The other was cast by the famous architect Brunelleschi (Brew-nel-less'kee). But Brunelleschi himself thought Ghiberti's relief was better than his own and so he very generously said he would withdraw and let Ghiberti be the winner. Then the judges said Ghiberti could make the doors.

Ghiberti set to work. He worked and worked. One year, two years, five years, *ten years*, and still he worked on the doors. You'll hardly believe how long it took to make them. I'll tell you the date when he began and when he finished. He started to work on the reliefs in 1403. He finished the doors in 1424.

"What!" you say, "twenty-one years to make one pair of doors? That *is* a long time!"

Finally the doors were finished and put in the Baptistery. They opened down the middle and had twenty-eight panels or scenes in relief, chiefly from the life of Christ. Each scene was made separately and then all fitted together.

Ghiberti's doors "made a big hit." Every one liked them so much that the men of Florence asked the sculptor if he wouldn't make another pair of bronze doors for another doorway to the Baptistery. There was no need for a competition this time. They knew Ghiberti was the man for the job.

Ghiberti started on the new doors. He worked and worked and worked. One year, two years, five years, ten years, *twenty years*, and still he worked on the doors. He began on these doors in 1425. He finished them in 1452. What! Twenty-seven years to make one set of doors? That *is* a long time!



THE GATES OF PARADISE

GHIBERTI

But this time, when he had finished, the doors were so splendid that many people said they were perfect. A famous sculptor saw them and said, "They are fit to be the gates of Paradise," and that is what they have been called ever since—the Gates of Paradise.

The Gates of Paradise have ten scenes from the Old Testament. Here is a "close-up" of the fourth scene showing the story of Abraham.



PANEL FROM THE GATES OF PARADISE

GHIBERTI

CHAPTER 14

A TREASURE HUNTER AND A SECRET

HAVE you ever had spring fever? Both kinds of spring fever? Yes, there are two kinds.

Do you remember how lazy and sleepy and tired you have sometimes felt on a warm spring day, when you didn't want to study or work or play or even eat? That's one kind of spring fever.

Then again, do you remember how energetic and healthy and restless you have sometimes felt in spring? When you wanted to run and shout and turn handsprings, when sitting still was terrible, when you felt as if you could do anything hard and beat anybody at anything? That's the second kind of spring fever.

Well, after the Middle Ages, the whole world got spring fever; and it was the second kind, the full-of-energy spring fever, and it lasted not just a few days in spring but many years.

Italy caught the fever first, about 1400. Just as life is born again in the spring after the dark winter and blossoms forth in green leaves and bright flowers, so new life was born again in painting, architecture, writing, sculpture, exploration, discovery, trade, and everything else, and blossomed forth after the dark of the Middle Ages.

This Born Again time, we call the Renaissance—a word that means Rebirth.

Now, one of the germs that had made the world catch this Renaissance fever was the interest people began to take in the skill and learning of ancient times. Statues and buildings that had been buried in the ground since Roman times were dug up. Old Roman

and Greek writings were brought to light and read again. In learning what the Ancients had done in art the Renaissance people did some great things in art themselves.

One of the first sculptors to make a thorough study of the Roman statues was named Donatello. He lived in Florence, but when still a very young man, he went to Rome with a friend named Brunelleschi. In Rome the two friends spent their time hunting through the old ruins for any beautiful Roman work they could find. Brunelleschi was more interested in architecture and he measured the old Roman buildings while Donatello looked for sculpture. Soon people called them the Treasure Hunters because they always seemed to be looking for buried treasure.

When the two Treasure Hunters came back to Florence, Donatello made a beautiful marble gallery for singers, for the wall at one end of the cathedral. The outside of the gallery he filled with sculpture of little children, who look like cupids, dancing and singing. It is a very wonderful piece of work, full of life and action.

Donatello's next famous statue was set up on the outside of a church in Florence. It is of Saint George. Saint George was a Christian in the Roman army at a time when it was very unsafe to be a Christian. To show he was not afraid of being called a Christian, he wore on his shield a bright red cross with a white background. This has ever since been called the cross of Saint George and is a part of the flag of England, for Saint George was adopted by the English as their favorite saint. He was a brave man and when the Roman emperor began to persecute the Christians, Saint George went to him and asked him to stop. For this, and because Saint George was a Christian, the emperor had him killed.

Of course Donatello didn't know what the real Saint George looked like, as he had lived so long before, and so this statue is not a portrait statue. It is what Donatello thought a fine, brave young Christian

officer in the Roman army ought to look like. So many other people, too, thought this was what Saint George ought to look like that the statue became very famous. It is very lifelike.

"There is only one trouble with it," some one told Donatello.



SAINT GEORGE

DONATELLO

"What is that?" asked the sculptor, who was afraid the man had found some fault in the statue.

"The trouble is it can't speak," said the man.

Donatello's most famous work was of a man on horseback. I'll tell you about that in the next chapter, for in this chapter I still have to tell you about a secret. Can you keep a secret?

A sculptor who was a friend of Donatello's had a secret. It was a very good secret and he didn't tell any one except his adopted son.

The adopted son had five sons of his own and when they grew up they were let into the secret, too. It was a family secret.

The sculptor who had the secret in the first place was named Luca della Robbia. Like Donatello, he lived in Florence. He was a little younger than Donatello and so we call him the second great sculptor of the Renaissance. Luca della Robbia made statues in marble and bronze. One of his works in marble was a gallery to go on the end wall in the cathedral, opposite Donatello's marble gallery.



PART OF THE SINGING GALLERY
LUCA DELLA ROBBIA

Luca della Robbia carved singing boys on this gallery as Donatello had on the other one. The two galleries are called the Singing Galleries. Luca della Robbia's looks better than Donatello's when you are close to it because Donatello's is rougher and not so smoothly finished. But when you are as far away from the galleries as you would be on the floor of the cathedral, Donatello's figures stand out better just because they *are* rougher. So it's about even between them.

They are both so valuable that they are now in a museum instead of in the cathedral.

But we've almost forgotten about the secret. Luca della Robbia found it took a great deal of time to carve in marble, and marble was very expensive to buy. When he got through and was paid for his work, he generally found he hadn't made much money. Bronze had the same drawbacks. He decided to try to find some material that could be quickly used and was inexpensive. He found it. What do you think it was? Not wood or stone, and of course not marble or bronze, but clay.

"Well," you say, "even the Greeks used clay. I remember the terra cotta figurines of Tanagra."

True, but wait. Luca della Robbia used terra cotta, but here comes in his secret. After he finished the clay statue, he put over it a coating of porcelain, which is something like glass. Then he baked the figure in an oven for just the right length of time. His secret was in mixing the porcelain or glaze, as it was called. When it was finished it would last in the rain and bad weather just as well as marble, whereas the terra cotta without the glaze would soon crumble away. Other sculptors tried it, but none did as fine work in glazed terra cotta as Luca della Robbia. His secret glazing process was very successful.

Most of the sculpture Luca della Robbia did in glazed terra cotta was in relief. The relief part was generally white like marble, but the background was a beautiful shade of blue.

Luca della Robbia taught his nephew, whom he had adopted as a

son, the secret of the glazed terra cotta. The nephew's name was Andrea della Robbia and Andrea became almost as famous as Luca. Andrea did most of his work in glazed terra cotta and he added many more colors to his reliefs, although he generally left the flesh part of his statues white. His best examples were reliefs of the Madonna and Child.

For the outside of a children's hospital in Florence, Andrea did a series of terra cotta high reliefs of babies in swaddling clothes. Each baby is on a separate round background. You may have seen plaster casts of these babies, but the plaster casts are white and so do not show the colors that Andrea della Robbia put on the originals. Each baby is called a *bambino* because that is the Italian for baby.



BAMBINO ANDREA DELLA ROBBIÀ

CHAPTER 15

NEXT BEST AND BEST

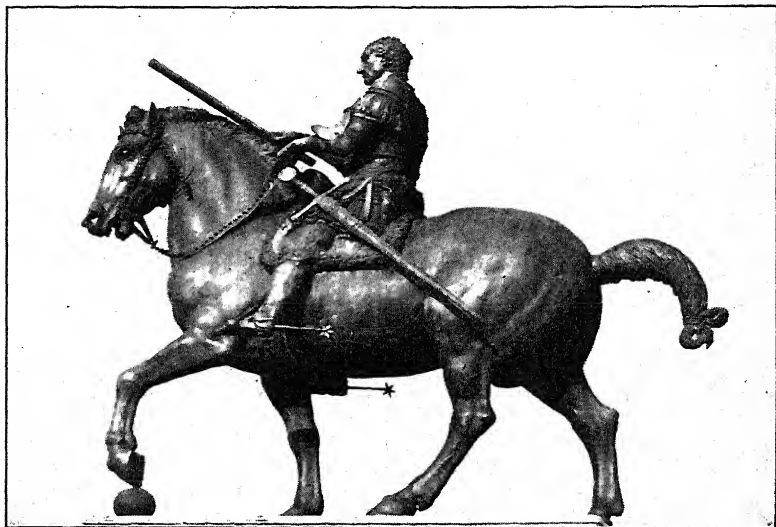
HAVE you ever seen a statue of a famous man sitting in an automobile? No? I haven't, either. And yet in the days when men used horses to carry them from place to place, many statues of great men were made showing them on horseback.

The reason there are no statues of men in automobiles is that a large man-made article like an automobile is not a suitable subject for sculpture. Very few man-made articles are. A sculptor tries to copy nature. His subjects are things that grow—men, animals, plants, flowers. A good mechanic with a hammer and chisel could carve an automobile in marble, but it takes an artist to model a horse.

You remember the horses and their riders made by Phidias on the Parthenon frieze? They are reliefs. It is much easier to make a horse in relief than in the round, because in the relief the horse is part of the background and does not have to support all its weight on its legs. A statue of a man on horseback is called an equestrian statue. The Romans made better equestrian statues than the Greeks because they knew more about supporting weights. But after the time of the ancient Romans no good equestrian statue was made for a thousand years.

The man who made the first good equestrian statue after all those years was Donatello. It was bigger than life-size and was made of bronze. It took Donatello ten years to make it and set it up in Padua, Italy. It is such a fine statue that many people call it the second best equestrian statue in the world. You can call it that too if you like, but what you should really call it is a hard name to pronounce and

even harder to spell. The man on the horse was Gattamelata, and so Donatello's statue is called the Gattamelata. Can you say it? The Gattamelata. Here is a picture of it:



THE GATTAMELATA

DONATELLO

Notice how heavy and strong the horse is. Gattamelata was a soldier and soldiers' horses in the time of the Renaissance were true war-horses—strong so they could carry the weight of a man in armor, and heavy so they could charge with great force like the heavy half-backs on a football team. I have never seen a real horse with his foot on a ball, and Donatello hadn't either, but he had to put the ball there to make the heavy statue steady. See what a well-balanced easy seat in the saddle the rider has.

If the Gattamelata is the *second* best equestrian statue in the world,

what is the best one? Think of all the sculptors who might have made the finest man on horseback. Think of all the hundreds or even thousands of years since sculpture began, and you will be astonished to learn that the best and the next-to-best equestrian statues were both made during the Renaissance; they were both made by goldsmiths; they were both made by men who lived in Florence; they were both statues of soldiers on war-horses, and they were both set up in cities in Italy not very far from Florence.

The best statue was made by a sculptor known as Verrocchio (Ver-rok'kee-o). Verrocchio was not his real name. It was the name of the man who taught him to be a goldsmith. Strangely enough, Verrocchio in Italian means "true-eye." Certainly he lived up to his name. The statue is of a soldier who was commander-in-chief of the armies of Venice. His name was Colleoni (Kol-lay-o'nee). Donatello's Gattamelata, Verrocchio's Colleoni.

Colleoni was a fine general. He commanded his soldiers well and fought well. He was very strong. He could race with his armor on against the fastest runners in the whole army. He liked to study, he encouraged artists and students at his camp, he was very courteous. He never ate too much or slept too much, and he was noted for his strict honesty.

When Colleoni died, it was found he had left all his fortune to the Republic of Venice on condition that Venice set up a statue of him in the Square of St. Mark. To put a statue there was against the law of Venice, so the Venetians thought they wouldn't get his fortune, after all. Then they had a bright idea. They remembered a building called the School of St. Mark which had a little square in front of it.

"Why can't that be called the Square of St. Mark too?" they said. So they had Verrocchio make the statue and put it there, and in this way they got the money left by Colleoni.

Verrocchio balanced the statue so well that no ball had to be put

under the uplifted forefoot of his horse. As the statue was on a high pedestal, the sculptor exaggerated Colleoni's features so they would look right when seen from the ground.

Here is a picture of one of the most glorious pieces of sculpture in the world and the best equestrian statue—Verrocchio's Colleoni.



COLLEONI

VERROCCHIO

CHAPTER 16

FOUR IN ONE

TO-DAY there is no famous sculptor who is also a famous painter. But in 1475 was born a man who became world famous as a sculptor, as a painter, and as an architect. He also was a poet and wrote good verses that are still published. Not only that, but he is considered the greatest artist of the Renaissance. Many people call him the greatest sculptor since Phidias.

The name of this wonderful genius was Buonarroti (Boo-own-arrot'ee). Have you ever heard before of Buonarroti? Very few people know him by that name. He is known to us as Michelangelo and even this name is written in three different ways—Michelangelo, Michael Angelo, and Michelagnolo. Michelangelo was trained as a sculptor in marble and he always spoke of himself as a sculptor in spite of the fact that his most famous works are the paintings in the Sistine Chapel in Rome. As a boy he carved a statue in snow that greatly pleased one of the famous Medici family, the Duke of Florence. The boy was permitted to study the old Greek and Roman statues collected by the duke, who later gave him work to do.

When Michelangelo was still a young man, he carved in marble a wonderful statue called the Pietà. This piece of work shows Mary the mother of Jesus holding her dead Son across her lap after His crucifixion. Some people like it better than Michelangelo's other works because it is calmer, more quiet and tranquil, than the statues he did afterward.

Some time after making the Pietà, Michelangelo was able to do a

piece of work that made him famous throughout Italy. There lay in Florence a huge block of marble that an earlier sculptor had begun to work on, but had been unable to finish because the marble was so long and narrow.

Michelangelo offered to make a statue out of this block of marble. He was given permission to carve it and went to work. The block was set up on end and inclosed with a fence so Michelangelo could work in peace. In three years he had finished. People came in crowds to see what he had done.

It was a colossal statue eighteen feet high, showing David with his sling ready to fight Goliath the giant. Strange to say, every one in Florence called the statue "The Giant," although it was of a man who killed a giant. It *is* gigantic in size. It weighs nine tons.

Michelangelo was a very careful student of anatomy. Anatomy is the study of the muscles and other parts of the body. He studied the bodies of people and even cut up dead bodies so he could learn about the muscles under the skin that would make a statue look lifelike. He knew so much about muscles that he carved some of his statues in strained and unusual positions, showing the proper play of muscles under the skin.

For the tomb of one of the popes, Michelangelo carved a statue of Moses. Of course he did not know what Moses really looked like. He had no pictures of Moses to go by, so the Moses he carved is the sculptor's idea of what a man like Moses ought to look like. Michelangelo carved horns on his Moses! You can see them in the picture. You remember, perhaps, how the Bible says the face of Moses shone with light when he came down from Mount Sinai? In early Italian translations of the Bible, the rays of light coming from the head of Moses were called by the translators "horns." And for this reason people of Michelangelo's time thought Moses had horns. The statue is forceful, majestic, powerful. All who see it remember it. Travelers have said it is like seeing Niagara Falls or the ocean or a storm at sea.

As famous as Michelangelo's Moses are the groups of statues that he made for the tombs of two members of the Medici family. These tombs are in the Medicis' private chapel, in the church of San Lorenzo. Michelangelo placed two figures, a man and a woman, on each tomb. Above these, in a niche in the wall, was placed a statue of the man whose tomb it was. One of these portrait statues is known as the Thinker and the other as the Warrior. The two figures on one of the tombs are known as Morning and Evening and those on the other as Day and Night.

Michelangelo lived to be eighty-nine and died in 1564.

Strange to say, sculpture got worse instead of better after Michelangelo, and it was many years before it began again to improve.



MOSES

MICHELANGELO

CHAPTER 17

CELLINI MAKES HIS PERSEUS

A MAN named Benvenuto Cellini (pronounced Chel-lee'nee) became known as the best goldsmith in Italy. His work in gold and silver and precious stones was so wonderful that the few examples we have now are all in museums and are considered priceless.

Cellini was a goldsmith, but he believed he could do good sculpture too, and although he was very boastful about it, he made good every boast, for his bronze statues turned out to be just as good as he said they would be.

Cellini lived in Florence and the Duke of Florence asked him to make a bronze statue of Perseus killing Medusa. Cellini worked hard and long on the clay model for the Perseus until he thought it was just right. Then came the work of casting the statue in bronze.

Nowadays, when a sculptor wants to make a bronze statue, he makes a clay model first and then sends it to the bronze foundry, which makes the statue in bronze. This is easier for the sculptor because he can put all his time on modeling statues and not have to do also all the work of bronze casting. But during the Renaissance a sculptor like Cellini generally had to make the bronze cast himself, as well as the clay model. This was often a very hard thing for a sculptor to do.

Now, Cellini's statue of Perseus and Medusa was to be larger than lifesize and many people in Florence said that it would be impossible for Cellini, a goldsmith, to make a good bronze casting of such a big statue. Even the Duke of Florence told Cellini he thought it would be

unwise for a goldsmith, who is used to working with tiny jewels, to cast a large bronze statue.

All this discussion, however, made Cellini the more anxious to do the bronze statue. He began by building a furnace to melt the bronze



Courtesy of the Metropolitan Museum of Art

A CUP BY CELLINI IN THE METROPOLITAN MUSEUM, NEW YORK

in. Then he dug a pit to put the mold in and connected it with tubes so the melted bronze could run down into the mold and harden. The mold was just the shape of the statue. To make it easier, Cellini cast the Medusa part of the statue first. The Medusa turned out very well indeed.

Then Cellini began the casting of Perseus. This was much harder to

do, on account of its greater size and peculiar shape. The fire in the furnace melting the bronze got so hot that the roof of Cellini's house caught fire. Cellini himself had to work like fury to keep the fire burning in the furnace. He got so exhausted that he suddenly became ill and had to go to bed, telling his helpers just what to do. He felt so sick he thought he was going to die.

Before long, one of the helpers came to Cellini's room and told him the statue was ruined, as the bronze was not melting right. Cellini, in spite of his sickness, jumped out of bed and dashed to the furnace. He was a very hot-tempered man and now he was in such a rage with his stupid helpers that he frightened them so they jumped every time he spoke.

A storm had come up and it began to rain. Cellini sent two men out for more wood for the furnace fire and then the fire got so hot the roof caught again. Cellini ordered some of the helpers to put up boards or carpets to help keep off the rain. Then they stirred the bronze with long iron rods until it began to be the right thickness again.

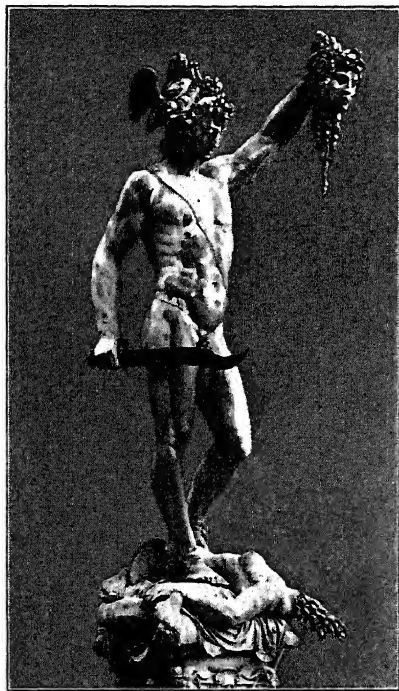
Suddenly there was a great flash of light and the crash of an explosion. They were all too scared to move. Then Cellini saw that the cap of the furnace had blown off and the bronze was bubbling over the top. So he quickly opened the tubes that would let the metal flow into the mold below.

Still the bronze didn't flow freely. Cellini thought the great heat had eaten up the metal that was mixed with the copper to make it flow. What was he to do? You'll never guess what he did.

What he did was to get all the pewter platters, bowls, and dishes in the house and throw them into the melting bronze. Pewter is a soft metal that was often used for dishes. The pewter melted and mixed with the bronze. The bronze flowed and soon the mold was filled. The scheme had worked. Cellini was so pleased he forgot all about his sickness and felt as well as ever. The next morning the servants had to go

out and buy a lot of new dishes before they could serve breakfast.

Here is the picture of the finished statue of Perseus killing Medusa, cast in bronze with so much bragging and trouble and excitement, by Cellini. Perseus holds up the head which he has just cut off. He is not



PERSEUS AND MEDUSA CELLINI

looking at it, because that would turn him to stone. Notice the queer-looking sword. Notice also that Cellini has made the blood flowing from Medusa in bronze, too.

The statue was set up in Florence and there it still stands, admired all the more by those who know how hard Cellini worked to cast it.

CHAPTER 18

A.M.—OR AFTER MICHELANGELO

WHAT goes up must come down. Sculpture had been going up. It had been getting better and better and better since the beginning of the Renaissance. Renaissance sculpture got 'way up to the top under the great Michelangelo. Then

it

came

down!

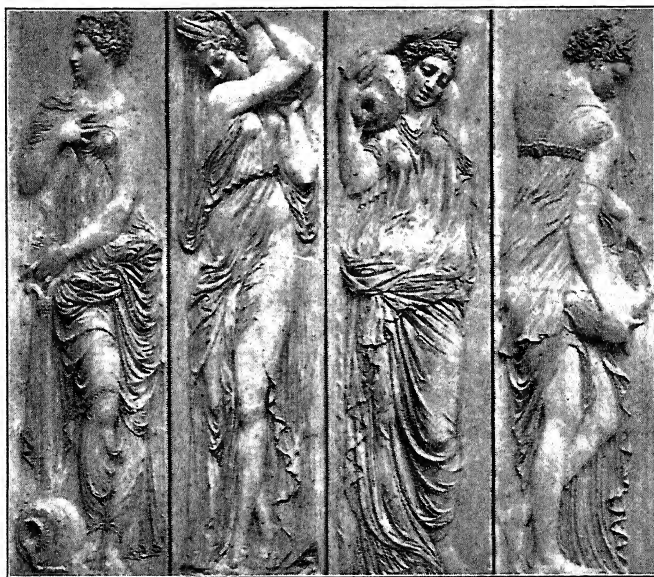
For two hundred years after Michelangelo there were hundreds of sculptors, but only a very few good ones. One of these good ones was Cellini, the goldsmith who made the bronze Perseus.

There were two more good sculptors after Michelangelo who were not Italians like almost all the other great Renaissance sculptors. One, named Jean Goujon (Goo-jonh'), was born in France. The other, called John of Bologna (Bo-lon'ya), came from the town of Douai in Flanders.

Goujon is best known for some beautiful water nymphs that he carved in very low relief. Water nymphs are like water fairies or sprites, but they don't have wings like fairies. Goujon carved the water nymphs in the most graceful way you can imagine. Each nymph is carved on a separate strip or panel of marble and as the panels are high and narrow, it must have been hard for Goujon to make each nymph so graceful and yet so different from every other one. To help show they were really nymphs of the water, Goujon made each one

with a jar from which she pours the water. Many years after Goujon was dead his water nymphs were used to decorate a fountain in Paris called the Fountain of the Innocents. Now they are in the Louvre in Paris.

I told you that John of Bologna was born in Flanders, but he didn't stay there. He moved to Italy and lived in Italy the rest of his life.



Courtesy of The University Prints

RELIEFS FROM THE FOUNTAIN OF THE INNOCENTS
GOUJON

All his important work was done in Italy. As a famous fountain he made was placed in the city of Bologna in Italy, people began to think he was a man of Bologna and called him Giovanni da Bologna, which means John of Bologna.

I've often heard people say when they get some joyful news, "I'm walking on air!" But that is really pretty hard to do. Don't try it.



FLYING MERCURY

BOLOGNA

Giovanni da Bologna made a statue that is walking on air. How? A statue can't walk on air any more than a person can! But this statue *is* walking on air. It is called the Flying Mercury and is Giovanni da Bologna's masterpiece. Now, to make a Mercury flying through the air, there shouldn't be anything but air to hold him up. So Giovanni made Mercury held up only by the wind. The wind is a bronze wind and is shown coming out of the mouth of a bronze wind god. The wind is blowing on the bottom of Mercury's foot. Look closely and you can see the head of the wind god facing up toward the sky.

Mercury really looks as if he were running in the air as well as flying with his winged cap and sandals and *caduceus*. The caduceus is Mercury's staff or wand that has the two snakes curling round it. Mercury was believed to be the messenger of the gods. He was also the god of commerce and hospitality and flocks and herds and speechmaking and sly tricks and dreams and peace and traveling and health and riches. The Greeks believed he invented the alphabet and numbers and astronomy and music and boxing and weights and measures and gymnastics and growing olive orchards. So you see what an important fellow he was. His caduceus is used as the sign of doctors in the United States army because Mercury was the god of health. When animals or people quarrel the caduceus was supposed to make them friends again. Mercury once saw two snakes fighting. He threw his staff down between them and the two snakes curled peacefully around it. So Mercury kept them there to show the power of his staff.

Nowadays when people think of Mercury, they generally think of him as looking like this Flying Mercury of Giovanni da Bologna. That statue fits my idea of how a flying Mercury should look. Does it fit yours?

CHAPTER 19

AN ITALIAN AND A DANE

THE best Italian sculptor since the time of Michelangelo was named Antonio Canova. We generally call him simply Canova. He lived from 1757 to 1822.

Canova was brought up by his grandparents and as his grandfather was a stone cutter, the boy had from the beginning a chance to be a sculptor. When he was only eight years old he carved in marble two small shrines. When he was about ten, he is said to have carved a lion out of butter for the banquet of a rich nobleman, who liked it so much he became Canova's patron, or backer.

Canova studied hard to become a sculptor and by the time he was a man he was doing a great many good statues. These brought him much fame and much money. The money he spent by giving it away to poor people, founding art schools, helping sculptors, and giving prizes for good sculpture.

Canova's statues are very smooth and pretty, but not very strong in appearance. He carved a great many of the ancient gods and goddesses and seemed to imitate the old Greek and Roman art. He also carved portrait busts of famous men, including George Washington.

Canova's Perseus with the head of Medusa reminds you of another Perseus. Canova's Perseus isn't so good as Cellini's, but probably it is just as famous.

When Canova was at the height of his fame there came to Italy in 1797 a young man from Denmark. He liked Italy so much he stayed there for twenty-three years and soon became famous as a sculptor.

Perhaps you have seen pictures of the dying lion he carved in solid rock—the famous Lion of Lucerne. It was made by a *Danish* sculptor in *Italy* in honor of the *Swiss* guards who died in *France* rather than surrender. That certainly makes a mixture of countries in one sentence.



PERSEUS

CANOVA

Who was this Dane? His name was Thorvaldsen (Tor' valt-sen). He knew Canova and, like Canova, imitated the style of the statues of ancient Greece and Rome. He was the most successful of the imitators. Some of his works, like the Lion of Lucerne, were not in ancient style.

When Thorvaldsen returned from a visit to Denmark after twenty-three years abroad, he had become so famous that he was asked to make a colossal statue of Christ and twelve colossal statues of the Apostles for a church in Copenhagen. Colossal, you remember means tremendously large. (Think of the Colossus of Rhodes.) These huge statues

were completed in Italy in twenty years and sent to Copenhagen. A copy of the Christ stands in the lobby of the Johns Hopkins Hospital in Baltimore.

When Thorvaldsen died, he left much of his fortune for the building of an art museum in Copenhagen. There most of his works are kept and in the courtyard the sculptor himself is buried.



THE LION OF LUCERNE

THORVALDSEN

CHAPTER 20

ON A TWO-CENT STAMP

WHEN I was a boy I collected postage stamps. Now I'm grown up, but I still have the stamps I collected and I still like to get new ones to put in my album.

If you collect stamps, I know one stamp I'm sure you have in *your* album. If you don't collect stamps, I know one stamp you've seen many times even if you have never looked at it carefully. They are both the same stamp. This stamp is the United States two-cent stamp with the side view of George Washington's head on it.

The picture on the two-cent stamp probably looks more like Washington than any other picture of him we have. The picture was made from a bust of Washington. The bust was made from Washington himself at Mount Vernon. It was made by a sculptor who was an expert at making busts that looked like the real people.

This expert was a Frenchman named Jean Antoine Houdon (Oo-donh). You can tell he was a Frenchman just by seeing his name. Houdon was one of the best sculptors France had had for two hundred years. When he was a boy he studied art in Paris and when he was twenty he won a prize for sculpture. The prize gave him enough money to study art in Italy for four years, so he went to Italy. He liked Italy and stayed there ten years instead of four. Then he came back to France.

Houdon said he believed a sculptor should try to make true likenesses of men who had brought glory and honor to their country so that people would always know what these men looked like. Houdon be-

came just as successful at making portrait statues as the Romans had been. Some people think he was even better than the Romans. The most famous statue Houdon made was of a French writer named Voltaire. Voltaire is shown seated in a chair.

Have you ever wondered why so many statues have eyes without pupils? I knew a boy who went through a picture book of sculpture and with a pen put pupils in the eyes of all the statues. He said he didn't like statues with blank eyes.

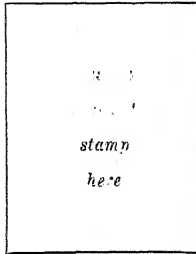
One reason the eyes are blank is because the sculptor tried to make the exact shape of the eyes. As you know, there isn't any hole in the outside material of a real eyeball and so the sculptor felt it would not be right to make a hole in the statue's eyeball. If a sculptor wanted to show the iris (the colored part) and the pupil (the black center) he painted them on the eyes or put glass or crystal eyeballs in the statue. Carving the eyes without pupils was good sculpture, but it did make the eyes look blank. Michelangelo very lightly carved a circle and dot on his David's eyes, but most of his other statues have blank eyes.

Now, Houdon thought, just as you probably do, that a portrait statue ought to have eyes with iris and pupil. So Houdon invented a way of his own for doing this. He made a deep hole for the pupil and made the iris in relief. He also left some of the marble for the white part of the eye a little raised so as to catch the light. Houdon's scheme worked very well. His portrait busts look very much alive. Some of the busts even seem to have a twinkle in their eyes.

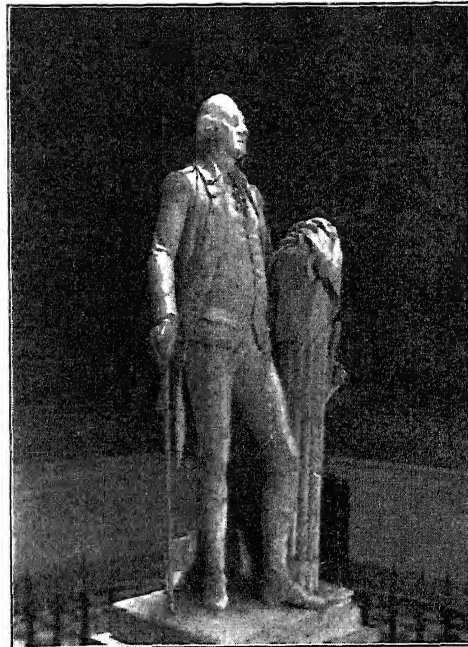
When Benjamin Franklin was in France he had his portrait bust made by Houdon. Franklin liked the bust of himself so much that he asked Houdon to come to the new United States to make a statue of George Washington. It took Houdon and Franklin almost two months to sail from France to America and that was a fast trip in 1785. The green one-cent stamp with Franklin on it is a picture from Houdon's bust of Franklin.

Houdon went to Mount Vernon and stayed with Washington until

he had made the bust that the postage stamp is copied from. This bust has never left Mount Vernon and you can still see it when you visit the home of Washington. Then Houdon made a full-length marble statue of Washington which is now in the Capitol at Richmond, Virginia. Here is a picture of it.

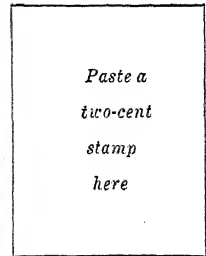


BUST OF FRANKLIN
BY HOUDON



Courtesy of The University Prints
GEORGE WASHINGTON

HOUDON



BUST OF WASHINGTON
BY HOUDON

Besides busts of Voltaire, Franklin, and Washington, Houdon made busts of John Paul Jones, Thomas Jefferson, Lafayette, and many other people—men, women, and children.

And now, even if you are not a stamp collector, you know more about the portrait on one stamp than many stamp collectors know.

CHAPTER 21

A LION, A SAINT, AND AN EMPEROR

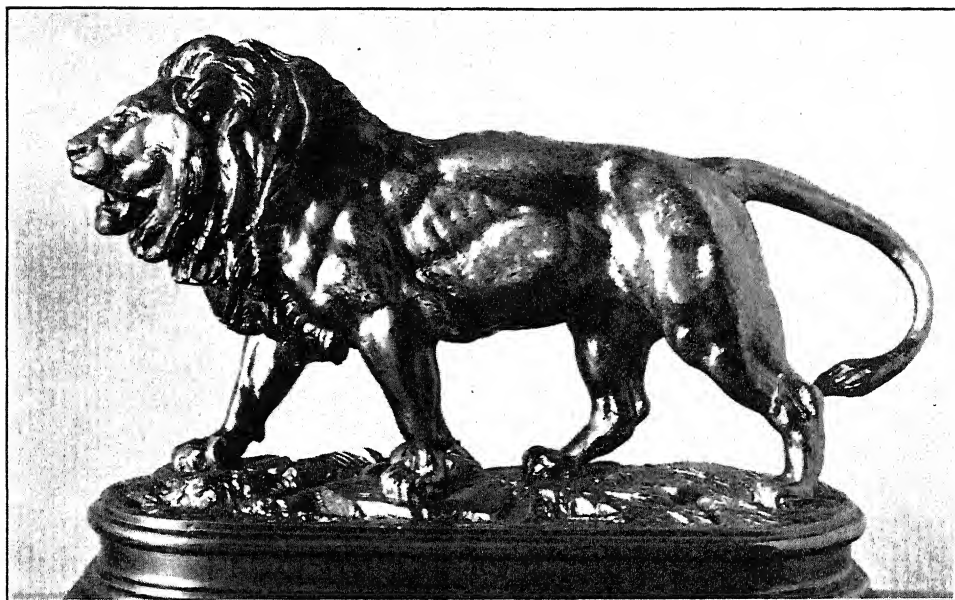
DO YOU like to go to the zoo? Almost everybody likes to look at animals or hunt animals or play with animals or draw animals or eat animals. A man named Barye (Ba-ree) liked to make statues of animals.

Barye lived in Paris. He worked in a jewelry shop and was a goldsmith as were so many of the Renaissance sculptors of Florence. But Barye lived much later than the Renaissance. He lived in the 1800's.

Barye loved to go to the zoo in Paris. He used to take paper and crayons to the zoo and draw pictures of the animals. Then he would go home and make little statues of the animals he had drawn. When he was at work in the jewelry shop, he often made tiny gold animals for watch chains and necklaces and bronze animals to go on clocks. In this way Barye practised until he became the best animal sculptor of his time in the world. His lions and tigers were especially liked by Americans and on the street corners of American towns men used to sell plaster casts of Barye's Walking Lion. Perhaps there is one of these Barye lions on the mantel-piece in your house.

Many of Barye's bronzes show pain and cruelty. He seemed to like to make statues such as a tiger eating an alligator or a jaguar eating a rabbit. Very few people like to see one animal killing another. I'm sure I don't.

Many of Barye's bronze animals are much too small for monuments, but people call his work *monumental* sculpture. This means that Barye modeled his statues in the same way large monuments that you



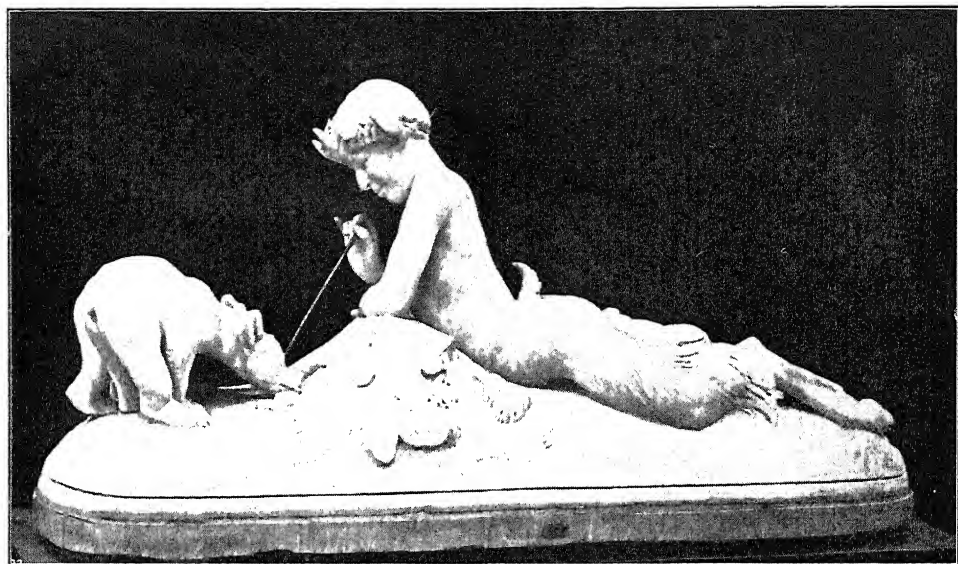
Courtesy of the Metropolitan Museum of Art
WALKING LION

BARYE

see in parks should be modeled. They are not filled with tiny details. I wonder if you would know what I meant if I told you they are heavy in shape. "Heavy in shape" doesn't mean they are not graceful, but it does mean that a Barye bronze looks beautiful even at a distance as well as near at hand—monumental.

Almost as good as Barye at making animal statues was still another Frenchman. His name was Frémiet (Fray-mee-ay). Frémiet made many splendid statues of animals. In one called *Pan and the Two Bear Cubs*, Pan is having lots of fun tickling the little bears with a straw.

Frémiet began making statues of people as well as animals. His statues of men on horseback—equestrian statues—proved to be his best ones. His most famous equestrian statue is his *Joan of Arc*. Joan



PAN AND THE TWO BEAR CUBS

FRÉMIET

is clad in armor and holds aloft the flag of the King of France as she leads the king's soldiers to battle.

Frenchmen are proud of Joan of Arc. They consider her a saint. Frenchmen are proud, too, of another leader of French armies, although he certainly wasn't a saint. His name was Napoleon.

You probably already know the story of Napoleon, the boy from Corsica who went to a military school, became a lieutenant in the French army, then a famous and successful general. He made himself Emperor of France and became the most powerful man of his time in all the world. At last he was defeated and went to live on Elba, an island in the Mediterranean. From Elba he suddenly returned to France. His old soldiers rallied round him. He raised an army to fight the English and the Prussians. He was beaten at the battle of Waterloo and sent to the island of St. Helena, far away in the South Atlantic

Ocean. There Napoleon spent the last six years of his life longing to return to lead his armies once more to victory. And there he died.

This statue shows Napoleon at St. Helena, a map of Europe spread on his knees, one hand clenched in rage at his loss of power, the other hand loosely open, showing how hopeless he feels his chance of returning is.

The statue was done by a sculptor named Vincenzo Vela, who was born in Switzerland. Do you like it? It is called a *dramatic* statue because it shows something happening. It is not just Napoleon, but Napoleon wishing to return and win back his past glory.



THE LAST DAYS OF NAPOLEON; VELA

CHAPTER 22

A HANDSOME PRESENT

HAVE you ever been inside a statue? Most big bronze statues are hollow and often there is room inside for a man—if there were only any way of getting in. But there is only one statue in the whole world that hundreds of thousands of people have been inside of. The thousands of people can't all get in at one time, but forty people *can* get into the head at one time. You've probably already guessed what I'm talking about. It is the Statue of Liberty.

The Statue of Liberty stands on a stone base or pedestal. The pedestal stands on a little island at the entrance of New York harbor. Every ship that goes in or out of New York passes near the statue. Even in the dark the passengers on a ship can see it, for at night it is lighted up with strong search-lights. Travelers coming back from abroad feel they are really home when they sight the Statue of Liberty.

The Statue of Liberty is the biggest bronze statue in all the world. What would you think if you saw a woman as tall as a ten story building? A woman whose hand is sixteen feet long. (What a hand for swatting mosquitoes!) A woman whose eyes are each two and a half feet wide. (What eyes to get cinders in!) A woman whose uplifted right arm is forty-two feet long. (What an arm for throwing baseballs!) A woman whose finger is as long as an elephant is high! If you wanted that woman to wear a ring, the ring would have to be as big as a hoop. If you wanted the woman to wear gloves, the material for the gloves would spread over more room than a tennis court!

Such a woman is Liberty. She is sometimes called "Liberty En-

*Photograph by Ewing Galloway*

THE STATUE OF LIBERTY

BARTHOLDI

lightening the World.” This is because Liberty holds a lighted torch in her raised right hand. The torch is so big that people climb a ladder inside the right arm and then walk around the torch as if it were a porch. You might make a rhyme of it:

Liberty’s torch,
Is used for a porch.

Held in Liberty’s left arm is a tablet. On the tablet (which is very much bigger than a dining room table) are these letters:

JULY IV
MDCCLXXVI

Do you know what they mean? Even if you don't know, I'm not going to tell you, so you have a puzzle to work out.

The Statue of Liberty can be seen from a long way off, but you can't get very close to it unless you take a boat. When you get off the boat you walk up some steps to the pedestal. Inside the pedestal you take an elevator and ride up to the top of the pedestal. Then you have to climb stairs to reach the top of the statue. The stairs wind round and round inside the statue like a snail's shell, and the higher you climb, the more you feel like going slowly—also like a snail. As you climb you can see the framework that the statue is built around, made of rods of steel. You can see how the statue is fitted together out of separate pieces of bronze.

When you finally get up inside the head you can look out of windows in Liberty's crown.

The man who made the huge statue was a Frenchman named Bartholdi (Bar-tól-dee). A Frenchman made it as a gift from the people of France to the people of the United States. Bartholdi chose the place for Liberty to be put and then went back to France and made a model. Then the model was used to make the huge bronze pieces of the statue itself. These pieces were brought, in a ship, to the United States and put together on the island. It was like fitting together a gigantic picture puzzle, for of course each piece of bronze was a different shape.

I think it was a very effective and friendly present for the Republic of France to give to the Republic of the United States, don't you?

CHAPTER 23

THOUGHTS FOR THINKERS

SUPPOSE you were a sculptor and wanted to make a statue meaning *thought*. *Thought* is an idea. In grammar we would call it an abstract noun. How, then, could a sculptor make as solid a material as bronze or marble represent an abstract idea like *thought*?

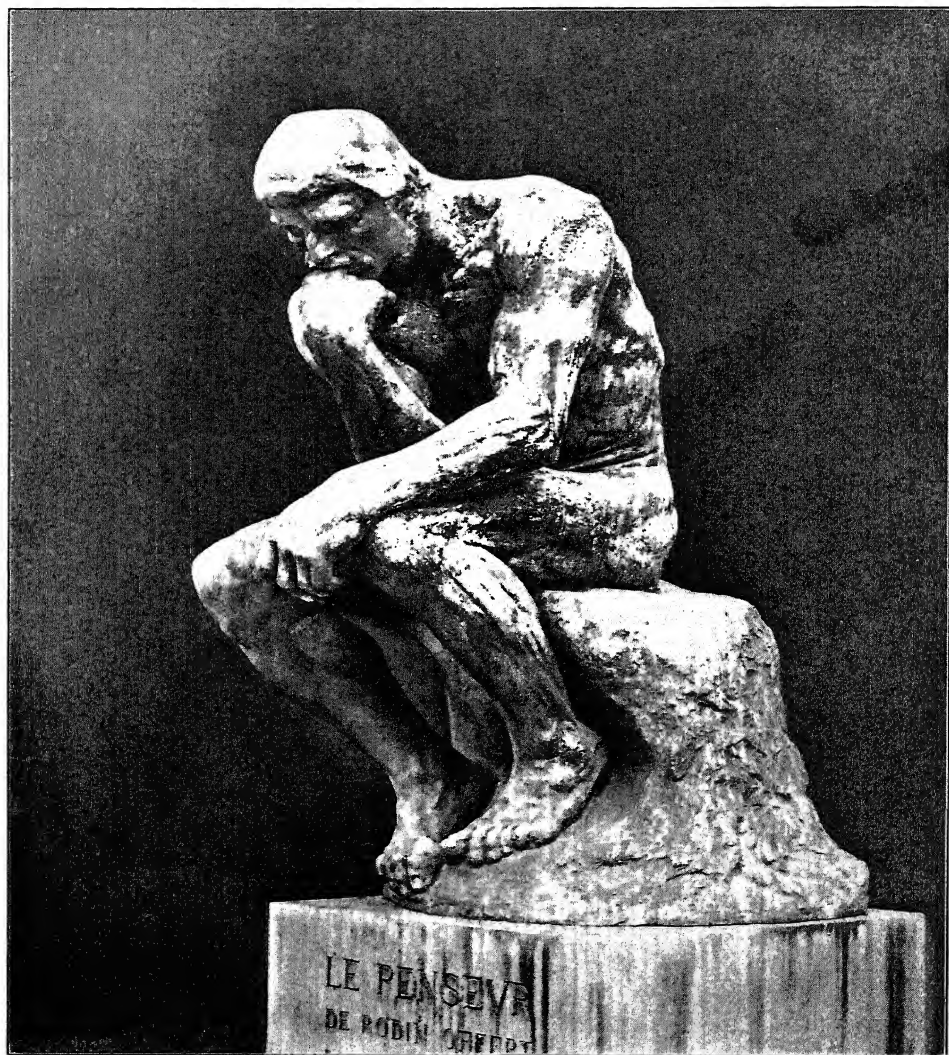
Of course a sculptor could make a statue of a person sitting as one sits when thinking. He could label this statue "Thought," but without the label it might just as well be "Sleep" or "Rest" or "Fatigue."

The Greeks solved the problem in their way by imagining a goddess of thought or wisdom and then making a statue of the goddess. The statue would look wise, but still it would be just a likeness of a goddess, not of *thought*. Any thoughtful or wise-looking woman might serve for the model.

Let's try another way. A person who does much thinking is generally able to think easily. Often, if he is a very wise and thoughtful person, you may not see him thinking at all. Probably he would not look as if he were thinking, because he could think so easily. He thinks with his brain and not with his muscles.

But watch a boy who is not very bright at his lessons trying to do an arithmetic problem. He does not think easily. He sticks out his tongue. He twists his legs about his chair. He bends his head on one side. He holds his pencil so tight his fingers hurt. You can see him thinking because it is hard for him to do it.

Now, instead of the boy, imagine a cave man. His muscles are big



THE THINKER

RODIN

and powerful. He is more like an animal than a man. As he is a man, however, he has a soul and sooner or later he will wonder about his life and what is going to come of it. Why is he here in this world? What happens when he dies? Does he just go out like a dying fire or does part of him live on in some other world that he knows nothing about? He begins thinking, wondering, pondering with his brute-like mind. Even more than the schoolboy, you can see him thinking. The first thing you would say if you saw him would be, "How hard he is thinking!"

A statue of such a cave man would show *thinking* much better than a goddess of thought or a brilliant thinker. A sculptor who used this idea of showing *thinking* by a statue of some one *trying* hard to think, was a Frenchman. This sculptor died in 1917. His name was Auguste Rodin (Ro-danh). His most famous statue is called "The Thinker." It isn't *thinking*—but a man thinking—a thinker. It is probably as near as any one can get to showing *thinking* or *thought*.

The statue is of a brute-like man. It isn't smooth and pretty like Canova's Mercury. It is roughly and strongly modeled. This rough modeling helps make the man look more brute-like and unused to thinking. He sits pondering, head in hand, pondering so intensely that even his toes are tightly clutching the ground.

Rodin loved contrasts. Often he carved delicate and beautiful forms as though they were just coming out of the uncarved marble block. The beauty is increased by the contrast of the finished part with the unfinished.

CHAPTER 24

OUR OWN SCULPTURE

I'VE told you about sculpture from Egypt and Assyria, Greece and Rome, Italy and France, but not a thing about our very own sculpture made in the United States. I did tell you that Houdon made his bust of Washington at Mount Vernon, but Houdon himself was not an American, so he doesn't count for the United States.

The reason I haven't told you about American sculpture is that American sculpture was late in starting. Probably the last thing the early settlers would have thought of bringing across the ocean to America would have been a statue. Statues aren't easy to carry around and the ships were small and crowded. Then when the settlers got here, they were too busy even to try to make statues. They had to chop down trees, build homes, plant crops, fight Indians, explore the country. Two hundred years after the first white settlement of America, they could boast of no real sculptors and, of course, they had no sculpture of their own.

At that time ships were built along the seacoast to bring back goods from other countries, and to hunt whales. These were splendid square-rigged sailing vessels. The owners were proud of their ships and decorated the ships' bows—the front part—with wooden figures called figure-heads. These figure-heads were generally the figures of mermaids or sea nymphs and seemed to be sprouting out of the bows of the ships. Some figure-heads were full-length figures, some were carved as far as the waist, and some were simply busts. Figure-heads were almost always brightly painted.

The best of the figure-head carvers was named William Rush. He was our first real sculptor. When he was a young man he was a soldier in the Revolution and afterward was an important citizen of Philadelphia. William Rush made many figure-heads, but he also carved a life-size statue of Washington in wood. His best carving in wood is the Spirit of the Schuylkill (School'kill) River. Rush's friends said that no greater piece of art was to be found in all the world than this statue of the Schuylkill's Spirit. We don't think it is as great as that now, but for a country that hadn't had any sculptors, it was good. Later the Schuylkill statue was cast in bronze and it still stands in Fairmount Park in Philadelphia.

The next important American sculptor was Horatio Greenough. His most famous statue was of George Washington. Greenough worked on it seven years in Italy. It is now in Washington and if you ever see it you'll never forget it. Washington, in this statue, isn't in his own clothes. He is dressed only in a kind of sheet, just as if he were a Greek god. Zeus was the head of the Greek gods, Washington was the head of the United States, and so Greenough carved this statue with the body of Zeus and the head of Washington. It looks very queer to us now. It was made in marble and is larger than life-size.

Born the same year as Horatio Greenough was Hiram Powers. Hiram Powers carved a statue in marble that for many years was the most famous statue by an American. It was a marble statue called "The Greek Slave." It is a young woman with her hands bound together by a heavy chain. Powers carved the Greek Slave in Italy because good marble hadn't been discovered in America.

Then came a sculptor named Thomas Crawford. He was given the job of making figures for the pediment or triangular space, made by the sloping roof, at one end of the new Capitol that was being built in Washington. Crawford called the figures which he made for this pediment, the Past and Present of the Republic. Sometime, I'm sure, you will make a trip to Washington. When you do, be sure to look at

Crawford's statues. They are on the Senate end of the Capitol.

While you are in Washington, you can't help seeing the statue on the very top of the dome of the Capitol. It looks like an Indian from the ground and many people think it is supposed to be an Indian. Really it is a statue of Liberty. It also was done by Thomas Crawford.

The Capitol at Washington has had many sculptors working for it. Another of these sculptors was Randolph Rogers. You remember the Gates of Paradise by Ghiberti. Randolph Rogers made two bronze doors for the Capitol that remind us of Ghiberti's doors for the Baptistery. There are eight small pictures in relief showing the life of Columbus. One of the reliefs shows Columbus with his hand out in front of him. The hand is just the right height to reach easily, so visitors to the Capitol always take hold of it. Then when they go home they can say, "I shook hands with Columbus." So many people have shaken hands with Columbus that the hand has become worn and shiny. Some day the hand will be worn away altogether so you'd better hurry to shake it!

The Rogers doors were cast in bronze in Europe. The European bronze casters would not tell American sculptors how to cast in bronze, and so Americans had to find out for themselves. A sculptor named Clark Mills was asked by Congress to make a statue of General Andrew Jackson. General Jackson had been a famous fighter and twice President of the United States. He had recently died.

Making this statue was going to be a tough job for Clark Mills. The statue was to be in bronze, and no bronze statue had ever been cast in the United States. What's more, no equestrian statue had ever been made in the United States. What's more, the sculptor Mills had never seen an equestrian statue. What's more, Mills had never seen General Jackson. But, in spite of all these things against him, Clark Mills went to work. He got bronze by melting up bronze cannon that General Jackson had captured.

Finally the statue was completed and set up in Washington. It

showed General Jackson taking off his hat as if he were acknowledging the cheers of a crowd. The horse is rearing back on its hind legs. You remember the Gattamelata statue has a ball under the horse's front foot. The Jackson statue has both front feet of the horse off the ground, but it is well balanced just on the two back feet. Congress liked the statue so much they gave the sculptor twenty thousand dollars extra, and the city of New Orleans had one just like it set up there.

The Mills statue of Jackson isn't considered as fine a piece of sculpture now as it was when it was new—just like Powers's Greek Slave and Rush's wooden Spirit of the Schuylkill. People make fun of it and it does look funny to us, but don't forget how hard it was to make our first equestrian statue. Here is its picture.



Photograph by Ewing Galloway
ANDREW JACKSON

MILLS

There was an early American sculptor whose work is still thought to be among the best. He was named for a President—John Quincy Adams Ward. Ward made an Indian Hunter that stands in Central Park, New York. The Indian has a bow and arrow in one hand and is holding back his dog with the other.



Photograph by Ewing Galloway
INDIAN HUNTER

WARD

Ward's best statue is of George Washington. The statue stands on the steps at the entrance of the Sub-Treasury building in New York City. It looks something like Houdon's Washington at Richmond, but I think you will really like it better than Houdon's.

CHAPTER 25

OUR BEST

NOW I'm going to tell you about Saint-Gaudens. Saint-Gaudens wasn't a Christian martyr, like Saint George; Saint-Gaudens didn't preach sermons to birds, as Saint Francis did; Saint-Gaudens wasn't one of the Apostles, like Saint John. In fact, Saint-Gaudens wasn't a saint at all. His last name was Saint-Gaudens just as it might have been Adams or Von Hindenburg. His first name was Augustus.

When I told you Saint-Gaudens wasn't a saint, I didn't mean you to think he was bad. Saint-Gaudens was a fine man, and a very fine sculptor. What a fine sculptor!

There is one way we know he was a truly great sculptor—his work is liked by so many different kinds of people. Young people (like you), grown-ups (like me), rich people and poor people, stupid people (not like you or me) and wise people (like you and me), all praise the statues that Augustus Saint-Gaudens made.

Augustus Saint-Gaudens's first great statue was of Admiral Farragut. Admiral Farragut was an officer in the United States Navy during our Civil War. The statue which stands in Madison Square, in New York City, shows the admiral as he must have looked standing on the deck of his ship. His feet are apart to brace him to the roll of the ship on the sea. His coat is blown back by the wind. His cap is pulled tight on his head on account of the stiff sea breeze. His face is strong and he looks determined, as if he had made up his mind to win no matter what happened.



Courtesy of The University Prints

ADMIRAL FARRAGUT

SAINT-GAUDENS

Now look at the base or pedestal on which the statue stands. Most pedestals are just big blocks of stone to hold the statue high. But Admiral Farragut's pedestal is really part of the statue. An architect, a man who designs buildings, helped Saint-Gaudens design the pedestal. Look at the streaks that make you think of sea water. Notice the dolphins at the ends. Notice the naval sword that carries your eye up again to the admiral.

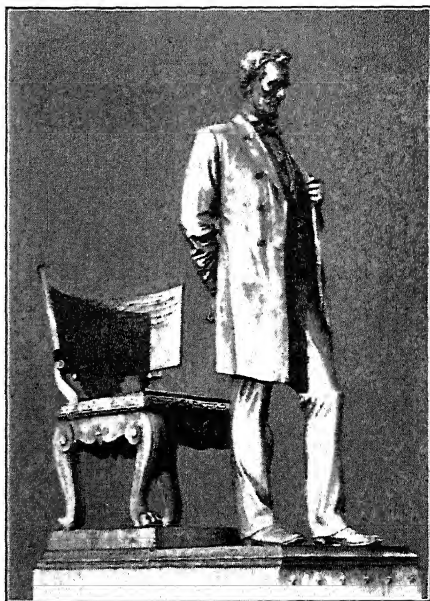
Notice one other thing: Admiral Farragut is in his uniform and the

uniform has trousers. This is the first statue I've shown you that shows trousers. Sculptors made their bronze or marble men in knee breeches in George Washington's time. When men began to wear long trousers, the sculptors had a hard time. Trousers in statues are apt to look like stovepipes or logs instead of like cloth leg coverings. Sculptors still think men's clothes with trousers not very suitable for statues. But Saint-Gaudens didn't let tree-trunk trousers spoil his statues. His statues are good even in trousers.

And here's another statue in trousers to prove it.

Saint-Gaudens's Lincoln is one of the best-loved statues in America. It stands in Lincoln Park in the city of Chicago. A copy of it was given to Great Britain by the United States and was put up near Westminster Abbey in London. Lincoln stands before a chair of state, or a president's chair. He looks as if he had just stood up to say something to the people before him. Lincoln's face seems very serious. It is a face that has in it both strength and gentleness, as though Lincoln knew that millions of anxious people were depending on him to lead them and comfort them. Do you know what "dignity" and "simplicity" mean? Saint-Gaudens's Abraham Lincoln has dignity. It has simplicity.

The Farragut and Lincoln statues are of leaders in the Civil War. So is the next statue in this book. Saint-Gaudens was much too



Courtesy of The University Prints
ABRAHAM LINCOLN
SAINT-GAUDENS



Courtesy of The University Prints
THE SHAW MEMORIAL

SAINT-GAUDENS

young at the time to be in the Civil War himself. But after the war, people wanted statues of the war heroes and Saint-Gaudens was chosen to make some of them.

Our next statue is of a Civil War officer. Saint-Gaudens made a statue in memory of Colonel Shaw, who commanded the first negro regiment from Massachusetts. The statue stands in Boston, on the spot from which Colonel Shaw and his soldiers started out for the war.

The Shaw Memorial is in relief. It shows the young colonel mounted on a horse and riding beside the marching colored men of his regiment. Above in the sky flies the Angel of Death. Saint-Gaudens put the Angel of Death there because Colonel Shaw was killed in battle with

many of his soldiers, a few months after marching out of Boston.

The sculptor worked on this relief for fourteen years. Again and again he made changes until he felt that every part of the statue was right. In fact, he was so careful to make it a good memorial that he spent more money on making it than he was paid for doing it. The marching soldiers, the slanting rifles, the spirited horse, the forward look of the rider, the drawn sword, give such swing and life to the whole statue that you can almost hear the tramp of the feet and the beat of the drums.

Do you still remember the equestrian statue that is called the best in all the world? And the equestrian statue called the next to best in all the world? Now we come to the equestrian statue that has been called next-to-the-next-to-the-best-in-all-the-world—the third best equestrian statue. The sculptor was Saint-Gaudens. The statue is of General Sherman. General Sherman was a Northern leader in the war between the North and the South. The statue shows General Sherman riding forward behind the Angel of Victory.

The Sherman statue is made of bronze, but it is painted with gold paint or gilt so that it isn't the same color as other bronze statues. It stands in the Plaza in New York City and every one riding up town or down town on the top of a Fifth Avenue bus can see it close at hand. It was done by the man we call the best American sculptor of all.

CHAPTER 26

DANIEL CHESTER FRENCH

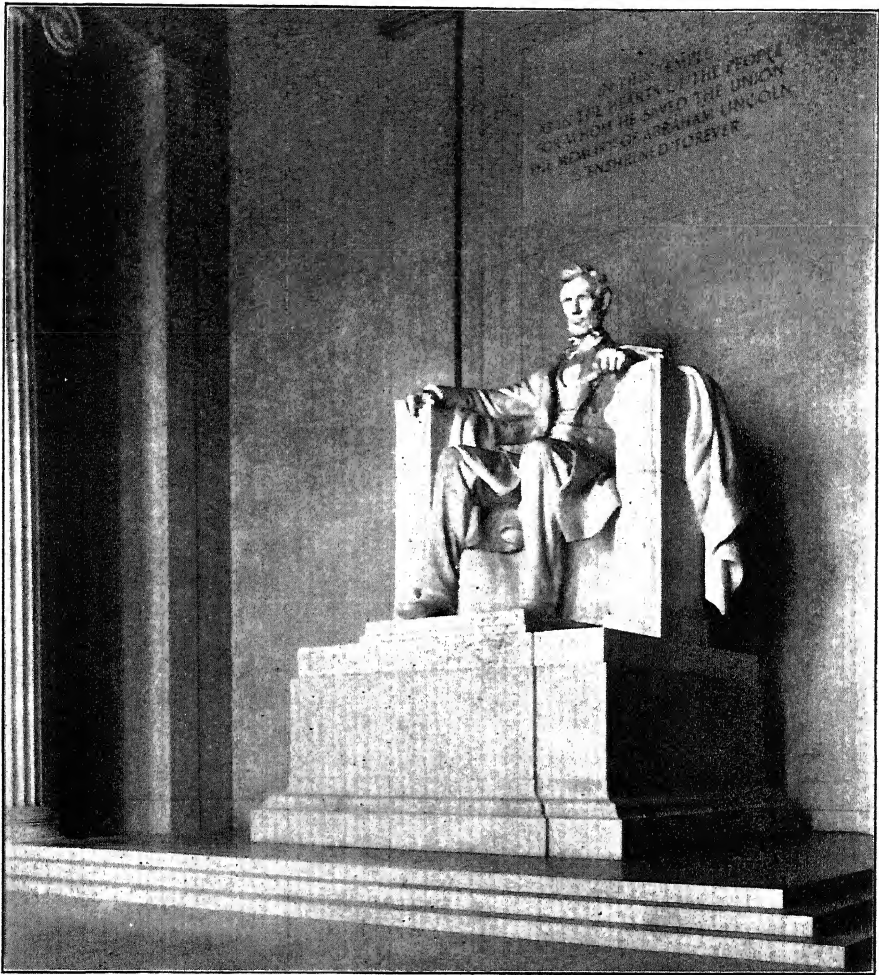
THE Great Sphinx is the biggest stone statue in the world. The Statue of Liberty is the biggest bronze statue in the world. The biggest marble statue in the world is in the Lincoln Memorial in Washington. The Lincoln Memorial is a beautiful marble building given by the United States in memory of President Lincoln. The statue inside is a huge figure of Abraham Lincoln. It is made up of twenty large pieces of marble so carefully carved and fitted together that the statue seems to be all one piece.

Now, just because a statue is big doesn't mean that it is a beautiful statue. A little piece of sculpture as big as your hand may be much more beautiful than a huge statue as big as a house. But this biggest marble statue *is* beautiful. It is great in other ways than just bigness.

The Lincoln statue is the only one in the building. Do you remember another great shrine with a single statue inside? See page 181. The inner walls of the Memorial are decorated with huge paintings, but the whole building seems made just to hold this one statue. Lincoln is seated in a peculiar kind of chair that looks like a throne. He sits facing the door so that you stand before him when you enter.

The whole memorial is so beautiful and impressive, so simple and so fitting, that you feel as if the spirit of Lincoln himself were in the building. I don't believe a single boy who knows anything of Lincoln's story could keep his hat on inside the Lincoln Memorial, no matter how careless he might usually be about such things. See picture on page 411.

The sculptor of this wonderful statue of Abraham Lincoln was Daniel



Photograph by Publishers Photo Service
ABRAHAM LINCOLN

FRENCH

Chester French. Let me tell you about two of his many other statues.

Daniel Chester French carved the Minute Man that stands on the battle-field at Concord, Massachusetts. Where the statue stands, the

road crosses a little wooden bridge over a stream and it was at this crossing that the New England farmers fired on the British soldiers—fired “the shot heard round the world.” The Minute Man was placed there in memory of those farmer soldiers. They were called minute men because they kept themselves ready to go to fight the enemy at a minute’s notice. The statue shows a minute man who is plowing when the call to arms comes. He leaves the plow in the field as he snatches his musket. It was French’s first statue, made when he was twenty-three.

Some years later Daniel Chester French made a statue called “Death Staying the Hand of the Sculptor.” The statue shows the Angel of Death reaching out her hand to take the hand of a young sculptor who is carving a sphinx in bas relief. Of course when Death takes his hand the sculptor must leave his work unfinished. The statue is in memory of a young sculptor named Millmore, who died almost at the beginning of his work. It is sometimes called the Millmore Memorial.



Courtesy of The University Prints

DEATH STAYING THE HAND OF THE SCULPTOR

FRENCH

CHAPTER 27

WOMEN'S WORK

MEN have made so many good statues that there isn't room in one book to tell you about them all. Perhaps you notice that I said *men* have made so many good statues. What about women? It is true that all the statues that I have told you about so far have been made by men. Until recently women have not been good sculptors. Generally they have not been good sculptors because they have not been sculptors at all—until recently.

The first person to make portrait statues in America was a woman whose name is now unimportant. Her portrait statues were very lifelike. They were made of wax and colored to look like real people and were just the same size as real people. She even dressed them in real clothes just like the wax figures in a clothing store. And then later a Madame Tussaud made the same kind of wax figures of people famous in history. Madame Tussaud's Waxworks are in London and you can go there and see such men as Napoleon and Theodore Roosevelt and Marshal Foch all looking so lifelike that they really seem ready to speak.

But waxworks aren't considered really truly sculpture, any more than a colored photograph is considered a really truly painting. After the early waxworks more and more women studied to be sculptors, especially in the United States, until now we have women sculptors who are just as good as men sculptors and so many of them that I can't begin to tell you about all of them. There is room for only two, I'm sorry to say, in this chapter.

One of these two is Mrs. Anna Hyatt Huntington. Mrs. Huntington has two favorite subjects for her statues. She is famous for her animal statues and for her Joan of Arc statues. The statue below combines both subjects. It is of Joan of Arc on a horse. Some people who write about art (they are called art critics) say that this statue of Joan of Arc is the best Joan of Arc statue that any one has ever made.



Courtesy of The University Prints

JOAN OF ARC

HUNTINGTON

Most statues of Joan of Arc show her as too old or too big or too grown-up looking. Joan of Arc was only seventeen when she led the French armies against their enemies. In Mrs. Huntington's statue Joan looks only seventeen. Then again, people who know about the kind of armor worn in the time of Joan of Arc say that Mrs. Huntington is the first sculptor to put exactly the right armor and equipment on Joan and on Joan's horse.

Perhaps you think the horse is too big for Joan. But probably it's more nearly the kind of horse the real Joan rode, than a smaller one would be. I told you war-horses had to be big and strong to carry the men in armor and to charge through the enemy and it's very likely that when Joan took command of the army she was given a man's war-horse to ride. Before fire engines became automobiles they used to be pulled by large and beautiful horses. The horse that Mrs. Huntington used as a model for her statue was a fire engine horse in Gloucester, Massachusetts.

The Huntington Joan of Arc stands on Riverside Drive in New York City. Do you like it as well as Frémiet's Joan of Arc? I like it better.

The other woman sculptor I want you to know is Gertrude Vanderbilt Whitney. Mrs. Whitney won the competition for a monument in memory of the people who were drowned when the *Titanic* sank. The *Titanic* was a great new ocean liner. On her first trip across the Atlantic she ran upon an iceberg and tore a hole in her bottom. She sank before other ships could reach her and more than fifteen hundred people were lost. The memorial designed by Mrs. Whitney shows a human figure standing erect with arms outstretched like a cross. It was made to be placed in Washington, D. C.

And now for Buffalo Bill! Yes, *the* famous Buffalo Bill, the daring Western scout, has an equestrian statue in his honor. Buffalo Bill's real name was William Cody, Colonel William Cody later, and the statue of Buffalo Bill stands in the little town of Cody, Wyoming, which Buffalo Bill founded. The statue, made by Mrs. Whitney, shows Buffalo Bill looking down into a valley signaling with his rifle to the wagon train that he is guiding through the Indian country. Where the statue stands in Cody, however, there is no valley right below and so perhaps Buffalo Bill is looking at the hoof prints of an Indian war party on the trail beside him. Maybe you prefer to think of him as looking at still something else.



Photograph by Ewing Galloway
BUFFALO BILL

WHITNEY

It's a very good statue. The horse was modeled from one of Buffalo Bill's own horses.

But though I've mentioned only two women sculptors, remember there are many more women who are making excellent statues, especially in the United States.

CHAPTER 28

THE END OF THE TRAIL

DO YOU save the best things till last? I know a little girl who was having tea with her aunt. The little girl very carefully ate all of her cake except the chocolate icing. She was saving the icing till last because she liked it best.

"I see you don't like your chocolate icing," said her aunt. "I just love chocolate icing, so I'll eat it myself." And the aunt did eat it all before the little girl could tell her she really loved chocolate icing too.

Well, I've saved till last several statues that I think you may like best of all. They are not supposed to be quite as great and famous as the Greek sculpture, or the best Renaissance statues or Saint-Gaudens's work, but here they are—the last sculptures in the book.

The first of my saved-till-last statues is a monument in memory of Eugene Field. Eugene Field was the man who wrote those jolly poems "Wynken, Blynken, and Nod," and "The Sugar Plum Tree." The sculptor might have made a portrait bust of Eugene Field, but instead he made something much more interesting. It is a statue of a little boy and girl who have fallen sound asleep because a fairy has waved poppy blossoms over them. Poppy blossoms, you know, are supposed to make you sleepy. You can see the poppy blossoms in the fairy's hand.

The fairy and the little boy and girl are in full round. Then there are scenes carved in low relief. One scene shows Wynken, Blynken, and Nod sailing along in the wooden shoe, with fish jumping all around them. You remember in the song they had nets of silver and

gold. You can see the nets hanging from the stern of the shoe. Another scene shows the Sugar Plum Tree with a pussy cat up in the branches and a little dog and some children looking up at the cat.



Photograph by Ewing Galloway
EUGENE FIELD MEMORIAL

MCCARTAN

The sculptor who made the Eugene Field Memorial (it is really a fountain in Chicago) is Edward McCartan of New York. He also made a very beautiful marble statue of the Moon Goddess Diana out hunting with her greyhound.

I think you'll like the next sculptor because you probably like cowboys and Indians and animals. Alexander Phimister Proctor has made statues of all of these. He helped Saint-Gaudens model the horse

for the Sherman statue. Proctor's best-known works are the famous Princeton Tigers. There are two big bronze tigers, one on each side of the entrance to Nassau Hall, a building at Princeton University.



BRONCO BUSTER

PROCTOR

Now look at the Bronco Buster by the same sculptor. It stands in Denver. The bronco, or cowboy horse, is trying to throw its rider. The bronco has bucked high in the air and is coming down stiff-legged on its two front feet. What a jolt the cowboy must be getting! Notice how the whole weight of this equestrian statue is carried by the two front legs of the horse.

James Earle Fraser is the sculptor whom we have saved to the very last. We can call him an all-round sculptor because he is good at large

statues in the round as well as reliefs and portraits, medals and coins. He can do people and animals. He has modeled for equestrian statues horses that are more than life-size and he made the tiny buffalo on the United States five-cent coin—the buffalo nickel. When you are studying United States history, see if you can get hold of a picture of James Earle Fraser's statue of Alexander Hamilton. It is a wonderful statue, full of dignity and grace.

James Earle Fraser designed the Victory Medal given to each American who served in the army or navy during the World War. Perhaps your father or your uncle has one of these medals. The medal has on the front side a bas relief figure of Victory. As this is an American medal, the sculptor put a crown with spikes on Victory's head like the crown on the Statue of Liberty. On the back are the names of the countries who were on our side in the war, and a United States shield.

Fraser made a wonderful portrait bust of President Theodore Roosevelt, who liked it so much he said he would never pose for another bust.

And now last of all comes Fraser's best-known statue. It is the famous *End of the Trail*—an exhausted Indian on a weary, worn-out horse. A strong wind blows at their backs. You can see the Indian's blanket and the horse's tail whipped forward by this wind. Everything suggests weariness. The horse's head droops low, the Indian's head nods forward, his spear points to the ground. You feel that both horse and rider have made a terrible journey, without rest, and have reached the end of the trail too tired to keep awake any longer. The *End of the Trail* is to mark in San Francisco the Western end of the Lincoln Highway which runs across the United States from the Atlantic to the Pacific.

In this book it will mark the end of our trail of sculpture. And now that you and I have finished this trip of ours along the trail of sculpture, from long-ago Egypt to nowadays America, I hope you are not so tired out at the end of the trail as Fraser's Indian seems to be. Our

trip had to be short, and so we missed seeing some of the finest statues and talking about some very good sculptors. And that is really a good thing. There is so much left for you to see that it should make you want to take the sculpture trail again and learn to know the sculpture I haven't even mentioned in this book. You, just like Buffalo Bill, will have to search for signs along the trail. I wish you a very happy journey.



Photograph by Ewing Galloway
END OF THE TRAIL

FRASER

PART III
ARCHITECTURE

CHAPTER 1

THE OLDEST HOUSE

SOME men were talking about houses. "How old is your house?" one of them asked me. "Five years old," I replied. "Well, my house is over a hundred years old," said the man. "It's in Massachusetts."

"Only a hundred years old!" exclaimed another man. "My house is two hundred years old. It's in Virginia."

"That doesn't seem old to me," still another man said. "My house is four hundred and fifty years old."

Each one was trying to tell a bigger story than the other.

"Four hundred and fifty years old!" I cried. "How can that be? That's before America was discovered, before there were any white men's houses in this country."

"It isn't in America," he replied. "It's in England. I'm an Englishman."

"Oh, well, that's different. If you count houses abroad, I've been in a house that's a thousand years old. It's a church. It's in France."

"Only a thousand years old?" The Englishman seemed bent on going me one better. "I've been in a house built two thousand years ago. It's in Greece—a temple. They call it the Parthenon."

"Well," said I, not to be outdone, "I can beat that. I've been in a house that is five thousand years old—a house built for the dead. It's in Egypt. They call it a pyramid."

"You win," said the Englishman. "No one can beat that."

And that's true. The oldest houses in the world are the pyramids in

Egypt—houses for the dead. But why are the oldest houses, houses for the dead? Where are the houses of the living—the houses they built five thousand years ago to live in?

They're all gone—long, long ago—and the reason is this: A man expected to live only fifty years or so and he built his house out of wood or mud bricks to last only as long as he lived, so the wood houses have all rotted away and the houses made of mud brick have turned back to dust. But he expected to be a long time dead, so if he were a king, he built a house for himself to be dead in and he built it so that it would last till Judgment Day.

You see, the Egyptians, hundreds of years before Christ, believed in resurrection. They believed their dead bodies would sometime come to life again, so they built the pyramids out of stone to last till then, and they had their bodies embalmed—that is, made into what we call mummies—to last till then also. Now, the pyramids are still there in Egypt, but the mummies that were once in them are not in them any more. They have been stolen or have been taken away and put in museums—in museums for any one and every one to gaze upon, in spite of all the care that the tomb builder took to have his body undisturbed till Judgment Day. We do not pay so much attention to how and where we are to be buried. Even kings and queens nowadays are buried in the ground with a monument over them or in a simple tomb.

There were over a hundred pyramids built near the river Nile by Egypt's rulers, but the largest is one built by King Cheops about three thousand years before Christ was born. That's about five thousand years ago. The pyramid is almost five hundred feet high. It used to be four hundred and eighty, to be exact, but the top has been broken off and it is now only four hundred and fifty-one. In spite of that, it is by far the largest stone building in the world—a mountain of stone.

The pyramid of Cheops is built of solid rock on a natural rock foundation, but as there was no rock near by for building the pyramid

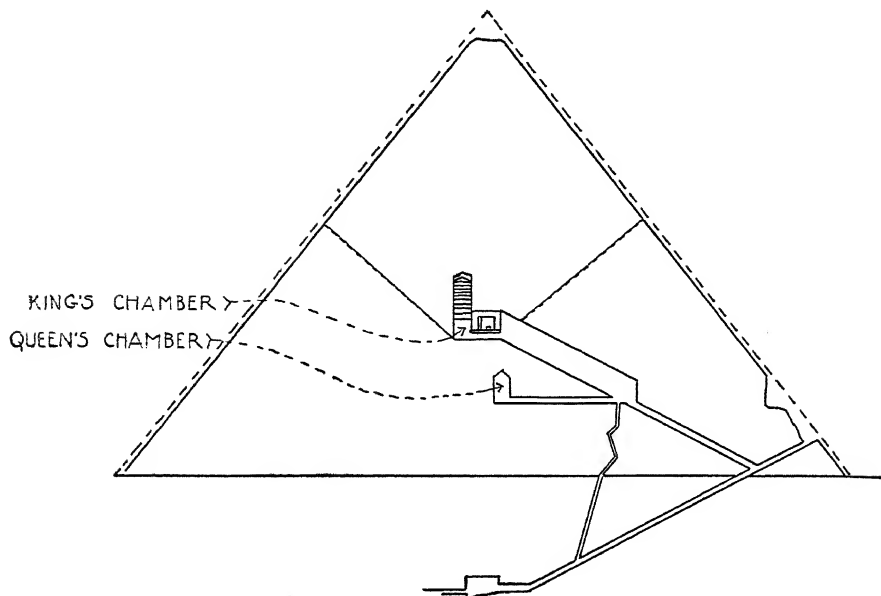
itself, it had to be brought from quarries some of which were fifty miles away and some five hundred miles away. Then it had to be dragged fifty miles or five hundred miles from the quarry. Some of the huge stones weighed more than a loaded freight car and it took several years to drag the rocks to the site of the pyramid.

You see, there was no machinery in those days—no pulleys or derricks, no tracks or trucks, no engines or mechanical contrivances—such as we have nowadays to lift and carry huge loads, so that every block of stone had to be pushed or pulled by sheer brute force. Hundreds of men tugged from in front and hundreds shoved from behind. And then each block had to be lifted and moved into place. Probably a roadway was built right up the side of the pyramid to where the block could be slid into position. It is supposed to have taken twenty years to build Cheops's pyramid and they say the king employed over a hundred thousand men to do the job.

The outside of the pyramid when it was finished was smooth, polished stone—perhaps in bands of different colored granite, but long ago all this covering of polished stone was stolen and carried off to make other buildings, so that the sides of the pyramid are now rough, irregular steps, each one several feet high, and you can climb to the top on any side simply by climbing from one step to another.

The Great Pyramid, as we call it, if it were sliced through the center like a piece of cheese, would show three small rooms one above the other and some slanting passageways to the three rooms. The rest would be solid rock. See the picture on page 280.

The topmost room was for the king's own mummy and in order to make sure that the weight of stone above would not crush through the room in which his mummy was, he had five ceilings of stone built, one above the other, with a space above each ceiling and then a slanting ceiling above them all. The two lines slanting upward from his room to the sides are small air passages. The room underneath his own was for his queen and the one under that, in the cellar or foundation of the pyramid



THE GREAT PYRAMID

was, perhaps, for nobody. That was for a while the great mystery of the Great Pyramid, but now we feel we have guessed the riddle. You see, there was only one passageway starting from the outside. From this one passageway another secret passageway led off to the king's and queen's chambers, but the passage that went straight ahead led down to the room that had nothing in it. Cheops was afraid that after he and his queen had been buried away in this tomb, some enemy of his might try to steal their mummies and so prevent them from coming to life again on Judgment Day. So he had all the passageways filled up with stone after he was buried and then the entrance covered so that no one could find where or how to get in.

But Cheops figured that if some one *did* find the entrance and began to dig out the passageway down to the cellar, this straight pas-

sage would lead him off the track and he would keep on down and not see the other secret passageway leading off to the king's and queen's chambers. Then when he did reach the empty room, he would find nothing—an April fool joke.

But in spite of all these extraordinary precautions that Cheops took to prevent any one's finding his mummy, all these passageways and rooms *were* later discovered and opened and the mummies were removed—to where, by whom, no one knows—and that was a joke on Cheops.

Though, as I told you, there are over a hundred pyramids, not all of them have the true pyramid form. That is, not all of them are triangular. In some pyramids the sides slope in very little at the bottom and then, as if the builder had changed his mind, they slope in faster toward the top. The Pharaoh who built his tomb like this may have been sick and afraid he was going to die before the pyramid was finished and so had to hurry up. In some of the pyramids the sides zigzag toward the top in several giant-like steps. Perhaps the Pharaoh just wanted to have his pyramid different from all the others. Some of the pyramids are built of brick instead of stone. Perhaps the Pharaohs who built such pyramids were poor.

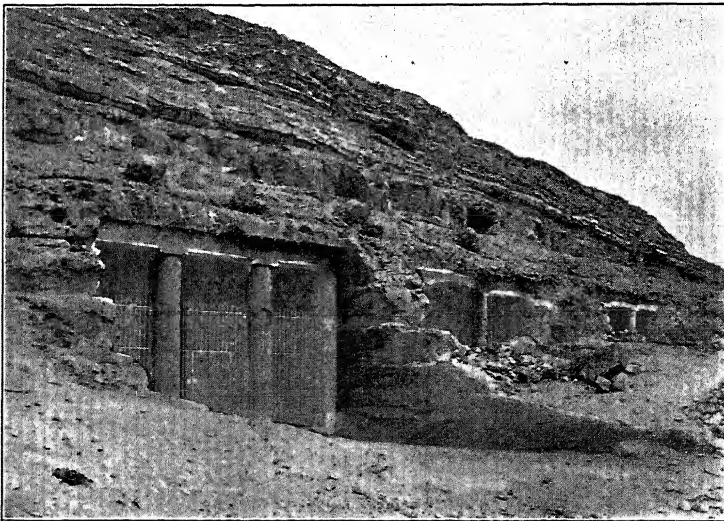
And so, the three greatest pyramids stand close together on the sands of the desert in giant majesty as they have stood for ages past and will for ages and ages to come, to thrill the beholder with their sublime grandeur.

Mere size doesn't make a thing beautiful. A big thing may be very ugly. But the pyramids are monuments to man's attempt to make something enduring, lasting, and the builders succeeded in making the most permanent, lasting thing ever built by man. The pyramids are also monuments to their belief in a life after death. And when we think of the millions of people that have come and gone, lived and died, since these mighty monuments were built, and the countless

millions that will come and go while the pyramids still stand on, it sets us thinking of the shortness of our little lives and the awesome length of eternity—and that is ART.

All the pyramids were tombs, but not all tombs were pyramids. That is—some tombs were not pyramid-shaped at all, but just stone buildings with flat tops. Furthermore, some tombs were simply caves cut into the rock cliffs on the west side of the Nile. These rock tombs were hollowed out on the west side of the river so that the entrance would face east, toward the rising sun. The Egyptians never faced their tombs any other way, for they thought the Sun God could not wake the dead on Judgment Day unless the tomb faced him as he rose in the east. If the tomb faced him he would wake these people who were dead, just as the rising sun shining into east windows wakes a sleeper in the morning.

Here is such a rock-cut tomb—one of the most famous—a tomb at Beni-Hasan:



Courtesy of The University Prints

TOMB AT BENI-HASAN

It is particularly interesting because it has two columns in front, two columns cut out of the selfsame rock. None of the pyramid tombs had columns.

So these are the oldest houses in the world. Houses of the dead. Pyramids and tombs.

CHAPTER 2

HOUSES FOR GODS

ALL of you at some time or other have built a house. It may have been a house of cards that blew over very easily, or it may have been made of books, or it may have been made of building blocks, or it may have been a shack in the back yard.

Now, every house must have walls and a roof. If you lean two blocks or cards together you have the walls forming a roof and the roof forming the walls. That is the simplest way—the sides form both walls and roof, as in a tent or a wigwam. The sides of the pyramids were both walls and roof. A pyramid was shaped something like a tent, but was built solid except for the small rooms in the center.

I told you the oldest buildings were tombs. The next oldest buildings were temples—houses men built for their gods. On the next page is a picture of the ruin of what we think was a temple. It probably never had a roof, but you can see several stone cross-beams still in place. It is called Stonehenge and it's not in Egypt, it's in England. I am showing it to you here because the stones still standing show very well how it was built—not as the pyramids were built, but by putting one stone across two standing stones. This is the second way of building.

The ruins of Stonehenge look very much like something a child might build out of blocks—two blocks standing up with one laid across. But these blocks are of stone, immense stones many times bigger than a man. Stonehenge probably was built just to inclose a space that was set aside as holy ground, where the ancient men came to worship the Sun God, for this was long before Christ was born and before the

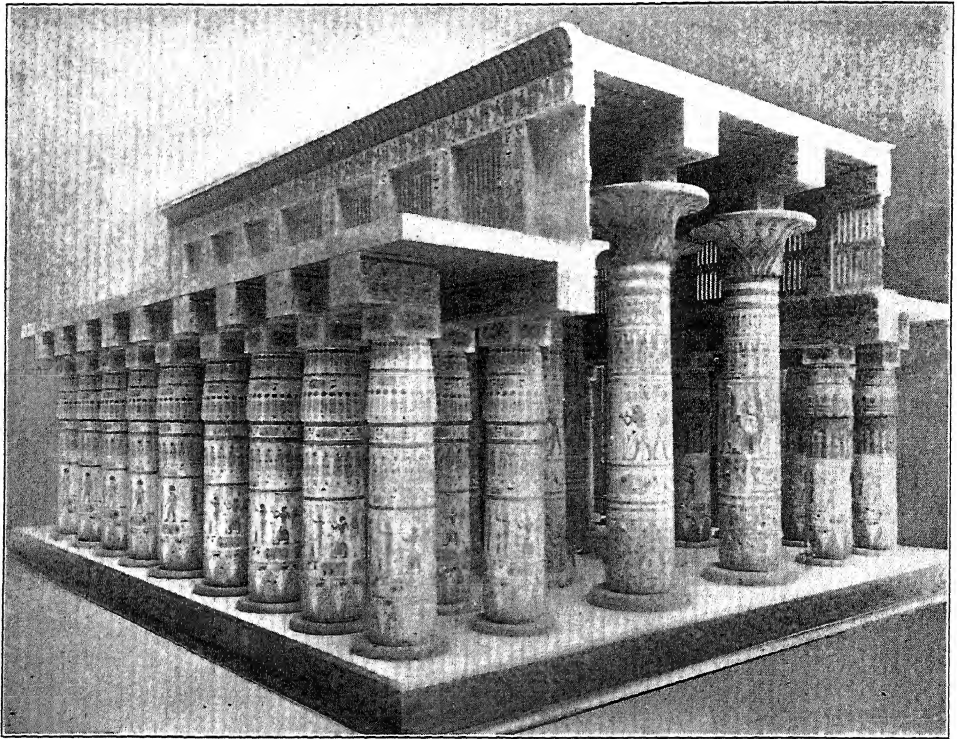


Photograph by Ewing Galloway

STONEHENGE, ENGLAND

Christian religion. We call the people who built Stonehenge, Druids.

One of the greatest and oldest of temples is in Egypt. It is the temple at Karnak, part of which was built by Rameses the Great, the Pharaoh who ordered all the Israelite children in Egypt killed. It also is a ruin and one of the most beautiful ruins in the world. You may feel that a ruin could not be beautiful. A broken down and dilapidated house or man is not usually beautiful. Why do you suppose this ruin of Karnak is called beautiful? I know a man who built a ruin in his garden! That's absurd, of course.



Courtesy of The University Prints

RESTORATION OF TEMPLE OF AMON, KARNAK

The main columns at Karnak which once supported the roof were almost seventy feet high (twelve times as high as a man standing up) and twelve feet wide (twice as thick as a man's height when he is lying down). These columns were made to look either like a single lotus flower or a bouquet of lotus flowers. Lotus flowers were water lilies that grew in the Nile.

There are other Egyptian temples, but though all of them are smaller, all were built in somewhat the same way. First there was an avenue of sphinxes leading to the temple, and then there were two

obelisks. An obelisk is a tall, upright stone pointed at the top and it was supposed to represent a ray of the sun.

After the obelisks, came the gateway to the temple. This was made with two huge towers called pylons one at each side of the door. The pylon walls slant inward and if they went higher they would meet like a pyramid. It is thought that the old astrologers—that is, men who told fortunes from the stars—used to go up on top of these pylons to “read the stars.” The front of these pylons had figures cut into the rock face. See picture, page 160.

Back of the gateway was a walled courtyard, and back of that was a hall of columns called a hypostyle hall, and back of that the Holy of Holies where the statue of the god was kept.

You know how people, when they go abroad, bring home souvenirs. Well, nations have done the same thing. They have carried away many of the obelisks in Egypt and taken them to their own countries. Sometimes these souvenirs have been given, sometimes they have been bought, sometimes they have been stolen. We have one in Central Park, New York, and there is another in London on the bank of the river Thames. These two obelisks are called “Cleopatra’s Needles,” though they were made long before the Queen of Egypt named Cleopatra lived and they look more like giant pencils than needles. One is in Paris in the center of a beautiful square. There are many in Rome.

CHAPTER 3

MUD PIE PALACES AND TEMPLES

IN THE Bible, *Chaldeans* means the wise men and priests of what you and I call the Two River Country. They were men of Chaldea, which was one of the countries in the Two River Country along with Assyria and Babylonia. Assyria was a little farther north than Babylonia and Chaldea, but all three countries were very much alike and sometimes all three were under one king.

The Two River Country was watered by a network of canals between the Two Rivers and so was very fertile. The finest crops in all the world grew there and many large cities were built on the plains. Nowadays these plains are dry and desert-like, for the canals have not been taken care of and without water the crops fail to grow. On the plains one can now see big mounds or low hills where once the palaces and cities stood. These are all that is left of the handsome buildings of this ancient land, and they crumbled into dust because they were made of *mud*, as I told you once before. Imagine a king's palace made of mud—mud baked in the sun like a mud pie! But you remember, do you not, that these Two River people covered their mud walls with glazed tiles and slabs of stone? The tiles were bright colored like bathroom tiles and the slabs of stone were carved in low relief so that even a mud palace became a handsome building.

But with only mud bricks the Two River builders were handicapped. They could not make mud-brick houses more than one story high. The houses would have tumbled down had they been higher. The walls were not strong enough to hold a second story. As a one-story house would not look very palace-like, when these people built a palace they first

made a hill with a flat top or platform of dried mud and placed the palace on that. The palace then seemed much higher.

The sides of the platform were very steep—almost, if not quite, straight up and down. So to reach the top of the platform a slanting roadway called a ramp was built against its side.

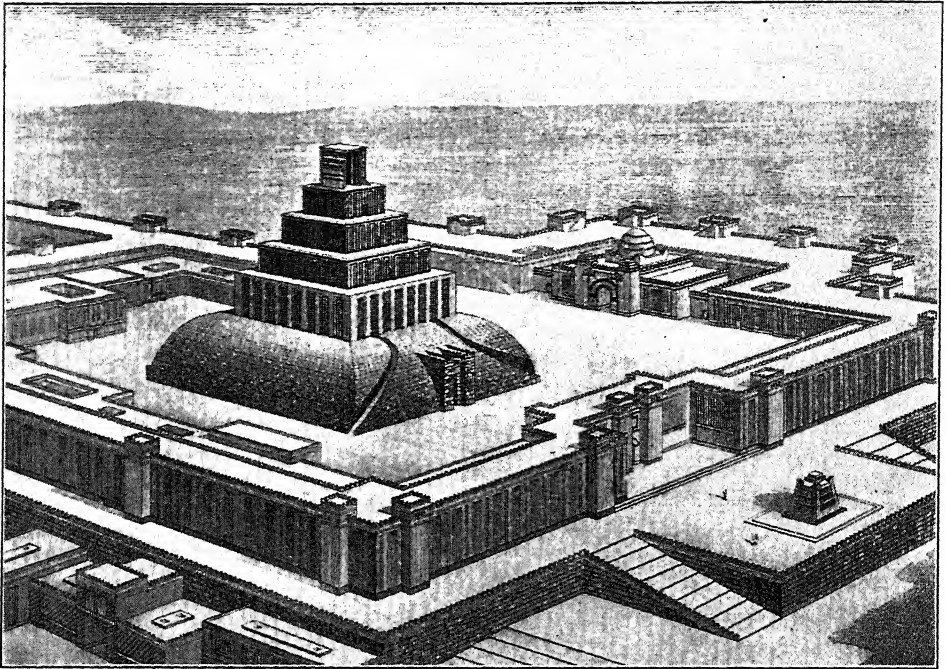
As mud walls were so crumbly, the builders had to make their palace walls very, very thick. Some were as much as twenty feet thick. The sun was very hot in that part of the world and these thick walls helped to keep out the heat. Further to keep out the heat, the Two River people made their palaces without windows, so the rooms were lighted only by lamps.

We usually think of palace rooms as large and spacious, but the rooms in the Two River mud palaces were very small. They had to be because of the lack of stone and of wooden beams long enough to stretch across a wide space. In a palace, however, the builders made up for the smallness of the rooms by having a great number.

The temples which the priests built were made of mud bricks, too, but the one single platform for a foundation was not enough, so they built several, one on top of another. This gave the effect of a terraced pyramid, as each platform was set back from the one below it. In New York and some other cities to-day, architects are again planning tall buildings in this ancient way—the stories stepped back, as we call it.

You remember the Bible story of the flood—how the Babylonians built a tower called the Tower of Babel so that in case of another flood the people could climb to the top and escape drowning? Well, the Tower of Babel was not built straight up and down. It was a stepped pyramid such as I have described. It was like a set of blocks of different sizes piled one on top of another, each one a little smaller than the one below. Each was reached from the other by a ramp. On the topmost and smallest platform was placed the temple or shrine for the idol.

The Tower of Babel was supposed to have had seven giant steps or terraces. Seven was a magic number. Each step was in honor of one



Courtesy of The University Prints

ASSYRIAN TEMPLE: RESTORATION

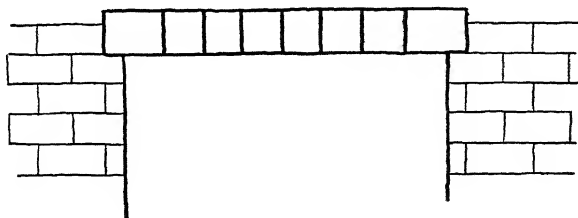
of the heavenly bodies. The topmost terrace, in honor of the sun, was covered with gold. The next, in honor of the moon, was covered with silver. Those below, in honor of each of the five planets, were painted in different colors.

The Chaldeans were the first to make a study of the stars and their movements in the sky, and they gave many of the stars names which we still use. We call such people astronomers. The Chaldean astronomers used the temple on top of these terraced pyramids or towers for an observatory—that is, a place from which to observe the heavenly bodies. That is why the Chaldeans came to be known as the wise men of the Two River Country.

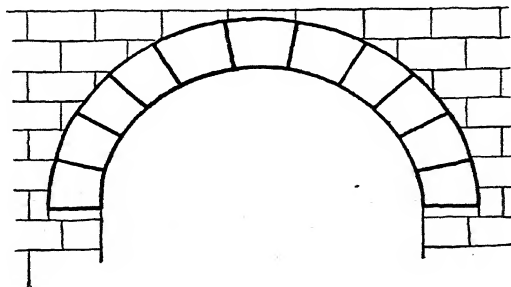
There is an old saying that "necessity is the mother of invention." That means if you haven't what you need, you will invent something else to take its place. It was necessity that made the Assyrians invent one of the most important ways of building that we use to-day. This way of building is what is called the Principle of the Arch.

The Assyrians had no stones long enough to stretch from one side to the other of a large room to form the ceiling, so they had to invent a way of covering a room or a doorway with small pieces of stone or bricks. You might call an open doorway an arch, but one piece of stone or wood laid across an opening does not make an arch. An arch must be made of several pieces.

Now, you can't cement bricks or small stones together strongly enough to make them into one piece that will stretch from wall to wall and not fall.



But if you arrange the stones in a certain way, they will not fall. This is the way, with the stones set in a curve or half circle and this is an arch.



By this simple arrangement, the stones are made to stay in place, not because they are stuck together, for they will stay in place whether cemented or not, but because each stone, pressing downward, trying to fall through, presses against the stones at each side and they are all so tightly jammed together that none can squeeze through and fall. The heavier the weight on top of the arch, the more firmly are the stones held in place, provided there is no way for them to push over the side wall and widen the space.

Try to hold half a dozen upright books in your hands by squeezing them together. If you can squeeze them tight enough, they'll not slip, but release your pressure and they fall. So to prevent the stones of an arch from slipping, the side walls of arches were made very heavy and thick.

Not only doorways but whole rooms could be covered in this same way. When a room was covered, the arch became what was called a barrel vault, as the ceiling of such a vaulted room was like half a barrel. If the room itself had circular walls, the ceiling became a bowl turned upside down. We call the bowl a dome, but the principle was the same—the Principle of the Arch.

While an arch or vault or dome was being built, it was necessary to have something to build the stones upon, for until the last stone was in place, the arch would not hold. Usually a temporary framework of wood, shaped like a half circle and called "centering," was therefore placed across from one wall to the other and on top of this the arch was built, starting at each side and working toward the top. When the last stone at the top, which was called the keystone, was put in place, then, and not until then, could the centering be knocked down and the arch would stand alone. In Assyria, however, there was so little wood for making centering that few arches or vaults were made and it was not until a thousand years or so later that arches were frequently used.

In Egypt, the pyramids are still standing because they were made

of stone and built in the most lasting shape there is. They cannot topple over or fall down. In the Two River Country not a single palace or temple is still standing. The bricks of which they were built have crumbled into dust again, so that all that is now left are the mounds of earth overgrown with weeds.

It seems impossible to believe that our great cities of to-day may ever become just heaps of dirt, grown over with weeds like the old Assyrian and Babylonian cities, or that the millions of people now living in the houses and thronging the streets should ever disappear. Yet the people who lived in Assyria probably thought the same thing.

CHAPTER 4

THE PERFECT BUILDING

IF YOU make a mistake in your arithmetic or composition, you can correct it or tear it up and do it over. If a picture or a statue is ugly, it can be put out of sight, hidden, or destroyed. But if a building is ugly, there it stands for every one to see. Its ugliness, its mistakes cannot be covered up until it falls down or is torn down. An architect once committed suicide just as the great temple he had planned was finished. He left a note saying that he had made five mistakes in the building and as they could not be corrected and could not be covered up, there they were for every one to see forever. He could not stand the disgrace.

Most buildings that are erected have many mistakes, many things that are ugly about them, though few people, few passers-by may notice anything wrong.

But there was one building that was erected over two thousand years ago that has no mistakes. It is one of the few perfect buildings in the world. It was built by men, but built for a woman, in honor of a Greek goddess, the Goddess of Wisdom, whose name was Athene Parthenos. And so the building was called after her last name, the Parthenon. It is on a high hill in the city of Athens, in Greece, and though it has been partly destroyed, people go from all over the world to see what a perfect building looks like.

The Egyptian temples had flat roofs because there was little or no rain in Egypt and so a sloping roof to shed the rain was not necessary. The Greek temples had to have slanting roofs, for Greece had rain. So the Parthenon had a sloping roof.



THE PARTHENON, ATHENS

The Egyptians built their temples with the columns on the inside. The Greeks turned the Egyptian temple inside out and put the columns on the outside. The Greek temple was not to hold people, but only the statue of the goddess. People didn't go inside to worship as they do in our churches. They stood on the outside. The columns the Greeks used were not like those the Egyptians used. They were simpler, but much more beautiful.

Greek temples had three kinds of columns, but the kind used in the Parthenon was the Man's Style column. It is called Doric after a very old Greek tribe. Not only the column but the style of building

that always went with this particular column was strong, simple, plain. That's why it is called the Man's Style. There were many Doric buildings in Greece, but the Parthenon was the most beautiful of all.

A Doric building is built on a terraced or stepped platform and is not made of mud bricks plated with alabaster or tile as the Two River people built their temples, but of solid stone, usually marble. There was no cheating in Greek building. It was really what it seemed to be.

Styles in ladies' hats and clothes change often, as you know, but the Doric style of building has lasted over two thousand years and we are still using it to-day. I'll try to describe it so you can tell it when you see it.

The Doric column has no base, but rests directly on the platform. It tapers slightly as a tree trunk does. Its sides are not perfectly straight. They may look so, but as a matter of fact, they bulge slightly. This bulge is called *entasis* and a column was given entasis because one that had straight sides, one without entasis, looked as if it were *thinner* in the middle.

Some architects of the present time, noticing this ever so slight bulge in the Doric column, have thought they would improve on it by making the bulge greater. Some people, when the doctor says take one pill, take two, reasoning that if one pill is good for you, two will be better. But the Greek entasis was just exactly enough and more entasis makes a column look fat and ugly like a man who is fat around the middle.

The sides of the Doric column were then fluted—that is cut with grooves so as to make slender, lengthwise shadows from top to bottom of the column and thus take away from the plainness that a perfectly smooth column would have. Most columns nowadays have no fluting. You can imagine how difficult it is to cut such channels in marble without making a single slip. One single slip would ruin the column and it couldn't be repaired.

The top of the column is called the capital because capital means

head. The capital was made of a piece shaped like a saucer, above which was a thin square block. You'll have to look at the picture to understand the rest.

There is probably some Doric building where you live, for as I have said we are still using this style to-day. It may be a bank or a library, a court-house or some other building. Examine it and see if it has all these things that a perfect Doric building has and only these things.

Are the columns of stone or only of wood?

Are they fluted or only plain?

Has it the proper capital and other parts as in the true Doric style?

Men have tried ever since the time the Parthenon was built to improve on the Doric temple, but it seems impossible to do so. Every change they make from the original is less beautiful.

One of my earliest recollections is a picture of the Parthenon that hung on the wall of my school room. I had seen it day after day for months. One day I asked my teacher what the picture was.

"It's a picture of the most beautiful building in the world," she replied.

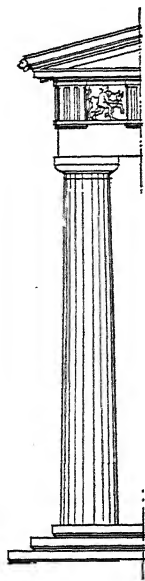
"What! That old wreck?" I exclaimed. "I don't see anything beautiful about it."

"You wouldn't," she answered.

That expression "You wouldn't" rankled. I wanted to argue why it wasn't beautiful, but she wouldn't argue.

"Wait until you grow up," she said.

I hated to be treated as a child who couldn't understand what was beautiful and what wasn't, so I set about trying to find out why the Parthenon was *not* beautiful. But the more arguments I tried to find, the less I found.



DORIC
COLUMN

And then one day, twenty-five years later, when I first looked upward at that great Doric temple itself, standing against the blue sky, a traveler at my side remarked, "I don't see anything beautiful about that broken down old ruin."

And at that, I turned and just kept myself from saying, "You wouldn't."

Even a young child can tell whether a person is beautiful or ugly, but even old people can't tell whether a building is beautiful or ugly, otherwise we shouldn't have so many ugly buildings. Any one can tell when a person is too tall or too fat, when his ears are too big or his nose too small, whether his proportions, as we call them, are right or wrong, but it takes a good eye to tell when a building's proportions are right or wrong. Any one can tell that a wart or crossed eyes or a double chin or bow legs are not beautiful.

Now, some buildings have just as ugly things as warts, double chins, or bow legs, but often even old people can't see them. But the Greeks had what we call "a good eye," not only for people's looks, but for a building's looks.

Some people can't tell when a picture is hanging straight on the wall. They may even measure the distance and declare it straight, but a person with a "good eye" can detect what the ruler may not show—that it is tipped the smallest bit, just a hair's breadth perhaps.

There are two important tools that every builder nowadays uses—a plumb bob and a level. A plumb bob tells whether a wall or a column or anything else supposed to be straight up and down *is* really straight up and down or vertical, as it is called. A level, which has a little bubble in a glass on its edge, tells whether a floor or a sill or anything else supposed to be level *is* really level or horizontal, as it is called. You can't fool a plumb bob or a level.

But the Greeks said you couldn't believe the plumb bob or the level, for columns that are really vertical seem to lean out and floors that are really horizontal seem to sag in the middle. That's because our

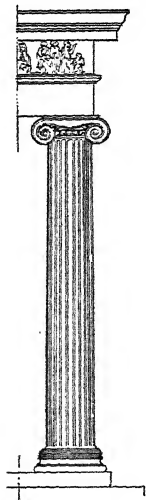
eyes make them seem so, but as it is our eyes that have to see buildings, the Greek builders of the Parthenon built it as they wanted the eyes to see it, and so, though all lines may *seem* to be vertical, horizontal, level, or straight, there is really not a vertical line or a horizontal line or a perfectly straight line in the Parthenon. That's one of the things that makes the Parthenon so extraordinary!

The columns were not made of single blocks of stone, but of drum-shaped pieces which, however, were cut with such exactitude that they fitted perfectly and no crack showed. It is even said the pieces have grown together like a broken bone that is well set!

CHAPTER 5

WOMAN'S STYLE BUILDING

IT MAY seem rather far-fetched to say a building is like a woman, but the old Greeks had far-fetched imaginations. They imagined, for instance, that a vain boy had been turned into the flower we call the narcissus; that a girl who dared to love the beautiful Sun God was turned into the sunflower; and that a nymph had been turned into a laurel tree. So it was not such a great stretch of the imagination, after all, for them to say that a woman had been turned into a certain kind of column or that a certain kind of marble column was like a woman.



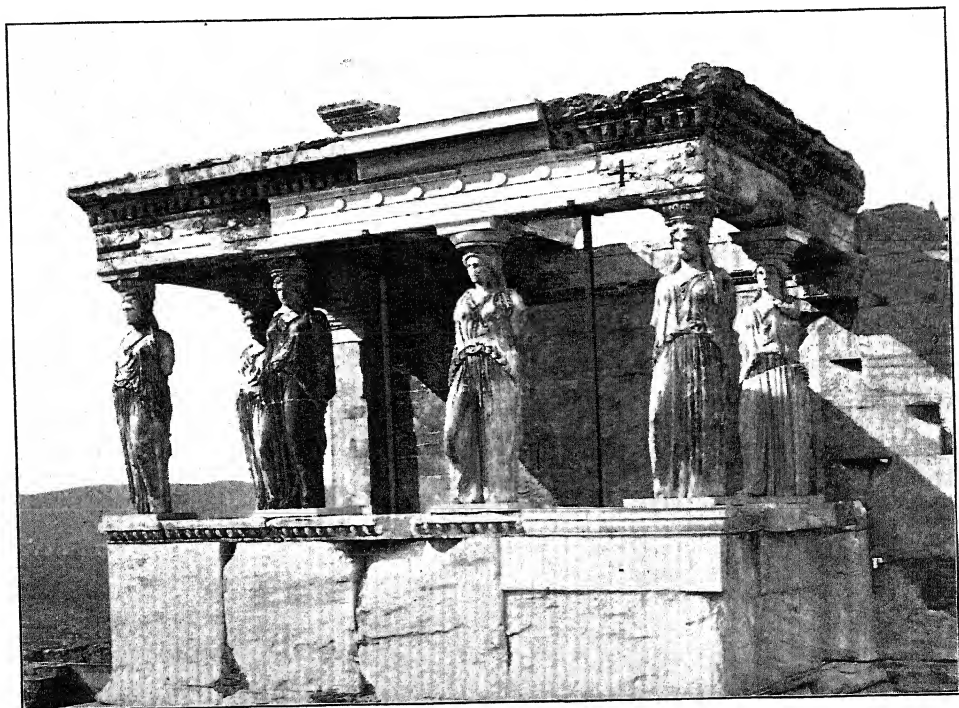
IONIC
COLUMN

An architect named Vitruvius who lived a hundred years before Christ said that the two curls on the head of this column were the locks of the woman's hair; that the grooves or flutings in the body of the column were the folds of her gown; and that the base was her bare feet. They called this kind of column Ionic because it was first made in Ionia, a colony of Greece across the sea in Asia Minor.

But the best Ionic building was in Athens on the Acropolis, near the Doric temple, the Parthenon. It was called the Erechtheum because it was built in honor of Erechtheus who was supposed to have been a king of Athens in days long past.

The Parthenon was a Man's Style building built in honor of woman.

The Erechtheum was a Woman's Style building built in honor of a man. Ionic columns were on three sides of the Erechtheum, but on the fourth end of the same building there are six statues of real women in place of columns and they hold the roof on their heads. It is called the Porch of the Maidens. So we get in the same temple, not only the Woman's Style columns, but the actual women's figures. The women's figures are called *Caryatids*. The story is that they represented captives from Carys condemned to stand in this position, holding the



PORCH OF THE MAIDENS

roof on their heads, forever. One of the Caryatids was taken away to England and in its place was put a copy made of terra cotta.

The largest and most famous Ionic temple in the world was not in Greece itself. It was in Ionia at Ephesus. It was built to Diana, the Goddess of the Moon, and was so magnificent that it was called one of the Seven Wonders of the World. The Bible tells us that Saint Paul nearly started a riot there by preaching against Diana, who of course was a heathen goddess, and that the mob wouldn't listen to him, but just to drown out what Saint Paul was trying to say against their goddess, kept crying aloud for two hours: "Great is Diana of the Ephesians! Great is Diana of the Ephesians!" The temple has disappeared (all but the floor), but the sayings of Saint Paul, which the Ephesians tried to drown out, still last.

Another one of the Seven Wonders of the World was another Ionic building at a place called Halicarnassus. It was not a temple, however, but a tomb built for King Mausolus by his widow. Though this tomb is no more, we still call any very large tomb to-day a mausoleum after the tomb of Mausolus.

You don't have to go all the way to Greece to see Ionic columns. There are probably many Ionic buildings where you live, but see if they are the true Ionic or what we call hybrid. That means a mixture, as a dog that is part fox terrier and part bull terrier is a mixture, a mongrel, a hybrid.

To-day our architects copy the Ionic style more often than they do the Doric, so if you should try to count the number of Ionic and Doric columns you can find in the place where you live, you would probably count several times as many Ionic as Doric.

CHAPTER 6

NEW STYLES IN BUILDINGS

PEOPLE get tired of seeing the same styles in dresses and hats and try to start something new. Ladies nowadays go to Paris for their styles. In the same way, architects used to go to Greece for their styles in buildings. Some architects have tried to start new styles in columns just to have something new and different, but the columns they have invented have all been less beautiful than the two Greek columns I have described.

The Greeks started a new style of column called the Corinthian, but they didn't like it very much themselves and hardly used it at all. The old architect Vitruvius, who told us the story of the Ionic column, tells us another fairy-tale to explain the Corinthian capital.

Vitruvius said that a basket of toys with a tile over the top was placed on the grave of a little girl in Corinth, as was the custom in those days. By chance, the basket had been placed directly over a thistle plant and the leaves of the thistle grew up around the basket. An architect, seeing this basket with the leaves curling round it, thought it would make a good design for a capital of a column, and so he copied it in marble and put it on an Ionic column in place of the Ionic capital. In this way was invented the Corinthian column.

So the Corinthian column is just an Ionic column with a different capital. The Greek thistle is called the *acanthus*, so the leaves which curl upward and outward on each side of the Corinthian capital are *acanthus* leaves. Just underneath the tile, which is called the *abacus*, are four corner scrolls or curls. They are like curl shavings the

carpenter makes with his plane, but not like those of the Ionic capital, which are like rolls of music. The Ionic curls faced front and back, but the Corinthian curls faced cornerwise.

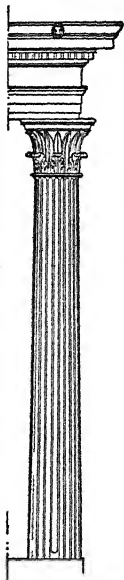
Many people think the Corinthian capital more beautiful than either the Doric or the Ionic, but others think it too fancy and not natural to have stone beams resting on leaves. At any rate, though the Greeks invented the Corinthian column, they hardly used it at all.

The Greeks finished all their great buildings about three hundred years before Christ was born, and all their great architects seem to have died, for no great ones lived after that time.

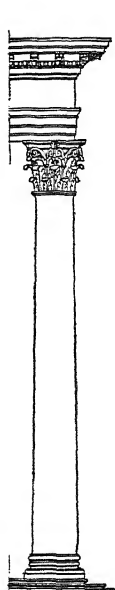
You know, from your geography, that Greece is nearly-an-island (called a peninsula) in the Mediterranean Sea. Next door to Greece is another near-island or peninsula called Italy. The capital of Italy was Rome, and after Greece had lost her power Rome became the capital—that is, the head—of most of the world.

The Greeks were great architects, but the Romans were great builders. There is a difference. The Romans built many fine buildings, but they didn't have as good taste as the Greeks. The Romans liked the Corinthian column better than either the Doric or the Ionic. The Romans also made another column *composed* of both Ionic and Corinthian capitals and so this column is called Composite. It had the large curls, or volutes, of the Ionic and the acanthus leaves of the Corinthian. Often it is hard to tell whether a column is Corinthian or Composite. In the Composite column, the Ionic top is larger than in the Corinthian, that is all. The Romans also changed the Doric column—gave it a base and left out the flutings and the saucer shaped part of the capital. This kind of Roman column was called Etruscan Doric or Tuscan.

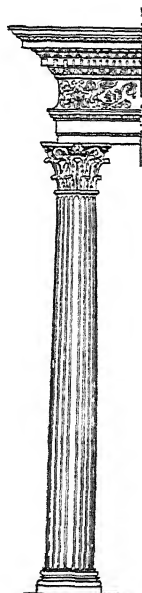
The Romans made other changes in their styles of building—



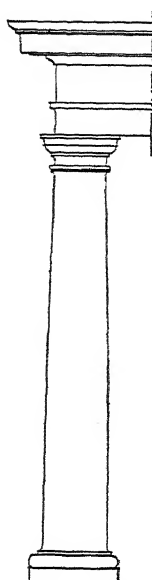
CORINTHIAN
COLUMN



ROMAN
CORINTHIAN
COLUMN



COMPOSITE
COLUMN



TUSCAN
COLUMN

changes for the worse. In order to make columns seem higher than they were, they frequently put a box-like base or pedestal beneath each column. They also placed split half-columns against walls. Such half-columns built against the wall are called *engaged*. Other columns they flattened out against the wall so that they appeared square. A column so flattened out is called a *pilaster*. You can remember the name by thinking of “plaster” and putting an *i* between the *p* and *l*.

The greatest thing the Romans did for building was to use the arch. As you know, the Assyrians invented the arch but used it very little because they had very little stone with which to build arches. But they never rested their arches on columns. The Greeks and other architects

before them placed a single stone across from column to column. But a single slab of stone could not reach very far, so the spaces between columns were never very great and never could be very great. The Romans were the first to make arches from column to column instead of using straight slabs of stone from column to column.

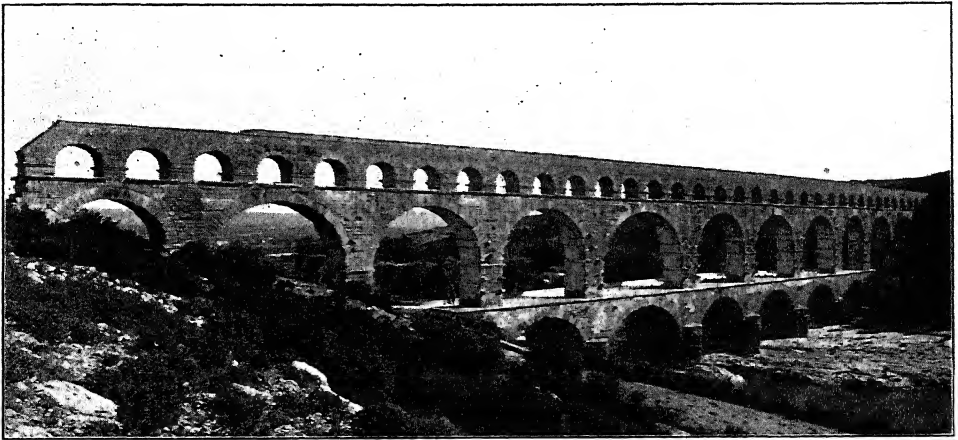
The Romans also made barrel vaults and domes which, you remember, were arched ceilings built on the same principle as the arch. By using the dome and the vault, they were able to roof over much larger spaces than ever could have been roofed over with single slabs of stone or with wooden roofs. Furthermore, a vaulted or domed roof of stone was fireproof, whereas a wooden roof, of course, was not.

Another great thing the Romans did for building was to use cement and concrete. Concrete is a mixture of cement with water and sand and pebbles. This mixture turns into stone when it dries. The Romans used cement between the stones of their arches and they made their domes and vaults of concrete. Now, an arch or a dome or a vault, if properly put together, needs no cement, for the stones push against one another so tightly they can't slip through and down. But, as I have told you, an arch does need heavy walls at the side so that the stone in the arch will not push over the walls, for the weight of each stone pushes and shoves sideways.

The Romans found a way out of this difficulty. They made their vaults and domes with cement or concrete to hold the stones together so that the vault or dome became a single solid stone. Such a concrete dome pushes downward but doesn't push sideways, so that heavy side walls are not really necessary.

You can rest a trunk or a piano or an automobile on blocks or bricks and the trunk or piano or automobile will not fall. But if the blocks or bricks are pushed sideways the least bit, the load they carry will fall. Have you ever stood up a row of blocks or bricks and tried to walk across them? Try it. If you press straight down as you step on them, they will not fall, but if you shove them sideways the least

little bit, over they go! Well, it's the same with a load on a column or a wall. As I have explained if the load presses straight down, a small column or small wall will hold the load perfectly well; but the separate stones in an arch do not push straight down. They push sideways and the wall must be made very heavy to keep from being pushed over by an arch. When, however, you have a *row* of arches on columns, each arch pushes against the next arch and the next arch pushes back so that there is no side push on the columns.



ROMAN ARCHES, PONT DU GARD, NÎMES, FRANCE

Arches push and shove. You may not see it, but they do. Try pushing against another boy who pushes against you. You can lean together like the sides of a letter *A*, but if one suddenly stops pushing or jumps aside, down the other goes. That's the way one arch pushes against another. Knock away one arch and down the other goes.

CHAPTER 7

ROME WAS NOT BUILT IN A DAY

SOME people wear imitation pearls, imitation diamonds, imitation jewelry—just for show. Some people build houses of concrete blocks to imitate stone, paint wooden columns to imitate marble, cover plaster walls with paper to imitate tile. Such imitations that pretend to be something they are not, are a kind of cheating, a fake. The Greeks never faked in this way. The Romans did so often. They built buildings of concrete or brick and covered the outside with thin pieces of marble.

For a few hundred years before and after Christ was born, the Romans built and built, many and great buildings, and more buildings of more kinds than had ever been built before. They built them not only in Rome and in Italy, but in other countries which the Romans owned.

Though the Romans built many great buildings, none of them quite equaled those the Greeks built. The reason was that the Romans were not artists but engineers. The Greeks were very religious and built temples; the Romans were great governors and worshiped everything that concerned governing. The Romans used instruments to design their buildings, whereas the Greeks used their eyes. In a Roman building, every line that was supposed to be vertical *was* vertical. Every line that was supposed to be horizontal *was* horizontal. Every line that was supposed to be straight *was* straight. It was as if they had drawn a picture with a ruler and square and compass instead of free-hand.

In the same way, a Roman building looks mechanical. We like them

as we like an engine. They are strong and powerful, but somehow seem to lack the beauty of a hand-made picture.

How many kinds of buildings do you think there are in the place where you live? Try to count them. Houses, of course, but how many others—churches, banks, stores, court-houses, libraries, and so on.



THE PANTHEON, ROME

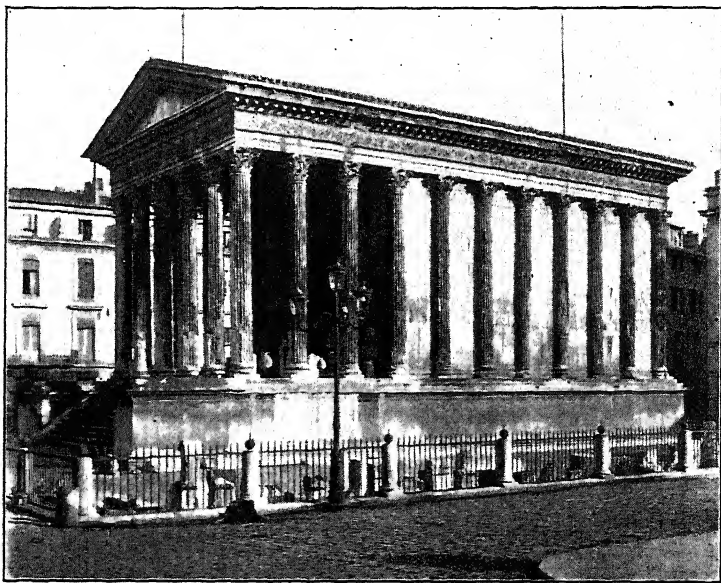
The Greeks had only a few, but the Romans built many kinds—not only tombs and temples, houses and palaces—

Arches and aqueducts
Bridges and baths
Court-houses and halls
Theaters and amphitheaters

Some were fake, but not all, and some were magnificent and imposing. Most of the Roman buildings are now in ruins, but one building—a temple built to all the gods—is still standing and in use to-day. It is called the Pantheon, which means “All the Gods.” It has

a porch in front with Corinthian columns, and back of the porch a circular building with a huge dome made like a bowl turned upside down, of concrete. The circular walls that support the dome are twenty feet thick and the only window is a large circular opening in the top of the dome. There is no glass in the opening, but so high is it above the floor that even a heavy rain barely wets the floor beneath.

The Square House is one of the finest of these Roman buildings, with engaged Corinthian columns as well as with whole columns.



MAISON CARÉE, NÎMES, FRANCE

It is not in Rome, however. It is in what is now France, but when it was built, France was a part of the Roman Empire and Romans built it. In France they call it the Maison Carée, which means Square House.

The theaters where the Roman actors gave plays had no roofs. The

seats were of stone and were arranged in a half circle that sloped upward as to-day. In France, at a town called Orange, is a Roman theater in which plays are still given.

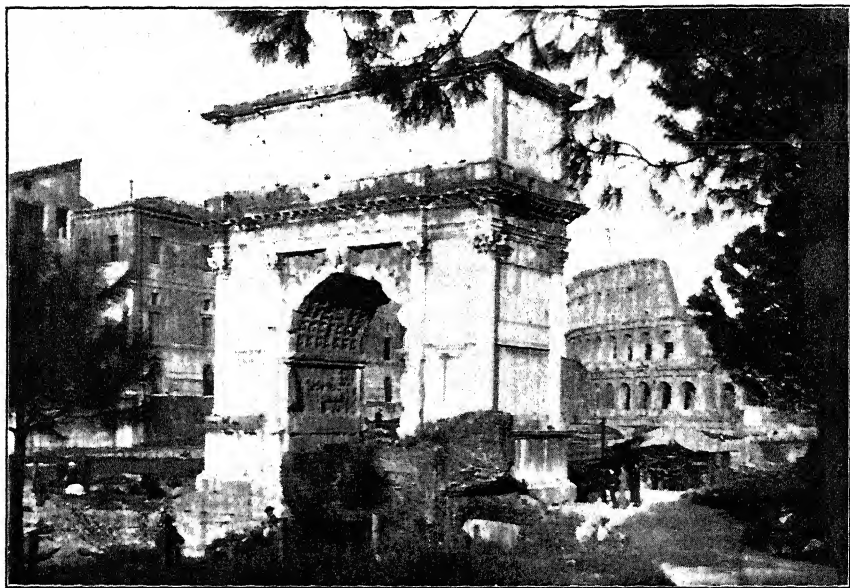
Nero was one of the worst rulers Rome ever had and one of the worst builders. He built himself a palace which he plated with gold. It was called the Golden House. Not a piece of it remains. He built a colossal statue of himself, fifty feet high. Not a piece of that remains, either.

Near where the colossal statue of Nero was, a huge amphitheater was built later and it was called the Colosseum. An amphitheater was something like a football stadium, but instead of games, there were fights held between men and men, or between men and wild animals. The Colosseum had stone seats arranged in an oval shape. The outside walls were four stories high; the lower three stories were rows of arches. Between the arches on the first or ground floor there were engaged Doric columns. Between the arches of the second story were engaged Ionic columns. Between those of the third floor were engaged Corinthian, and on the fourth-story wall were Composite pilasters.

The Colosseum is now a ruin, but a great part of it is still standing. The amphitheater held as many people as a large stadium does to-day, but there was a still larger one called the Circus Maximus which held a quarter of a million people—as many people as in a large city and many more than the largest stadium to-day holds. Circus in this case doesn't mean a circus; it means a ring and Circus Maximus meant the Largest Ring. The place where it stood is now built over by blocks of dwelling houses.

The Romans built public bath houses, for the common people had no baths at all in their homes. These baths were huge buildings with arched or vaulted rooms in which a thousand or more people could bathe at one time. There were not only hot and cold and warm baths, but gymnasiums, game rooms, and lounging rooms, and so on. They were public places for amusement and recreation.

The Romans built large arches, separate from buildings, just for their rulers who had won great battles to march through with their soldiers. Such arches were called Triumphal Arches. One, called the Arch of Titus, was built to celebrate his conquest and destruction of the city of Jerusalem. The Arch of Titus has one large single arch.



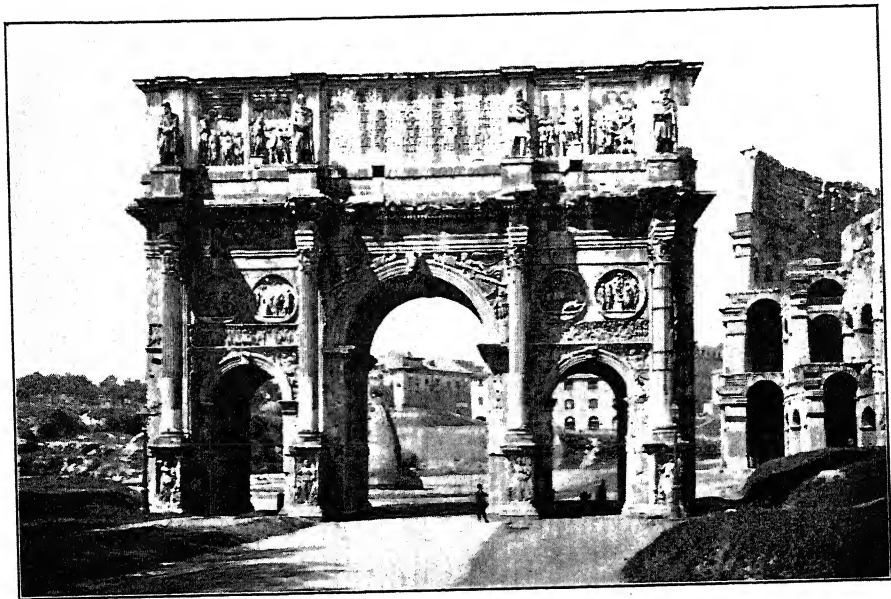
Photograph by Ewing Galloway

ARCH OF TITUS, ROME

Another arch, the Arch of Constantine, was built in honor of that ruler who was the first emperor of Rome to become a Christian. The Arch of Constantine has one large and two smaller arches, one at each side. You can see the Colosseum in the background of both pictures.

The bridges the Romans built were among the strongest and most substantial structures they made. Some of these bridges were built, not for people to walk across, but for water to run through. On the top of such a bridge was a trough through which water flowed from its source to the city. It was like a river held up by a bridge. Such a bridge

of arches carrying water was called an aqueduct which means water pipe or water carrier. Nowadays, water is brought to a city from a river or lake or reservoir, through large pipes which may run underground and up and down hill. But the Romans built aqueducts instead of pipes to carry water to a city, and these aqueducts—some of them



ARCH OF CONSTANTINE, ROME

over fifty miles long—sloped just enough so that the water was always running down hill. There is a picture of one on page 307.

The Romans made one other kind of building from which later Christian churches were copied. These buildings were court-houses or public halls and were called basilicas. Basilicas were long buildings with rows of columns on the inside which held up the roof. There was a center aisle and two side aisles and the roof over the center aisle was higher than the roof over the side aisles, as in the case in most of our churches to-day. In a later chapter I'll tell you more about basilicas.

CHAPTER 8

TRIMMINGS

MEN wear cuffs and collars. Ladies wear ornaments and trimmings. Buildings wear trimmings, too, to keep them from looking too plain and unfinished. These trimmings on buildings we call moldings and borders. The Greek and Roman builders used moldings and borders of certain shapes and designs, and builders nowadays use many of the same moldings and borders.

Perhaps you have never examined closely the panels of a door, the edges of a doorway or window, the picture molding under the ceiling, or other trimmings around the outside of a building, but if you should notice them you may be surprised to see that most of them are not just flat strips. They have different shapes. The different shapes of these moldings have names just as the boys and girls you know have names, so you can become acquainted with them.

I'll introduce them to you:

There is a molding that is square as seen from the edge, and so simple that you might think a name unnecessary. It is called a *fillet*, which means a ribbon or band. In olden times women—and men, too—wore a *fillet* around their heads, to keep their hair in place and as an ornament. Nowadays, buildings often wear *fillets* just as an ornament. A *fillet*, as seen from the edge, is like the drawing at the left.

When a *fillet* is sunken in, like a square groove, it is called simply a *sunken fillet*. It is like this drawing on the right.



Here is a molding that is half round as seen from the edge. Architects call it a *torus*, but to carpenters it is a "half-round."



Here is the torus, or half-round, sunk in, forming a round hollow or groove. Its right name is *cavetto*, which means a little cave, but carpenters call it a groove.

Here is a molding that, seen from the edge, looks like the curve of an egg. It is called by architects an *ovolo*, which means egg-shaped, but carpenters just say "egg molding."



Here is a molding that is hollowed out with the same egg shaped curve. It is called a *scotia*.



Here is a molding with a curve like an *S*. The hollow is at the bottom. It is called an *ogee*—just like the exclamation "Oh gee"! The ruler you use in school may be in the shape of ogee molding.



Here is a molding also with an *S* curve, the hollow at the top. It is called a *cyma*, which means a wave.



Do you think you can recognize these moldings when you see them and call them by name? They are in couples—four couples. One is raised and one is hollow; one fits into the other.

Mr. and Mrs. Fillet

Mr. Torus and Miss Cavetto

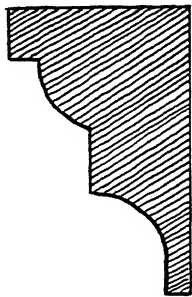
Mr. Ovolo and Miss Scotia

Mr. Ogee and Miss Cyma

Usually, instead of just one simple molding, two or more of these moldings are used, one alongside the other and there are several beautiful moldings made by such combinations.

In most of the combinations, the square fillet is used between the

curved moldings. This arrangement of square and curve makes the curved moldings stand out more sharply, thus:



See how many of these moldings you can find in your own house or in some one else's house.

There are also several kinds of borders. The simplest is the zigzag, which is also called the *chevron* because it is like the chevron that a soldier wears on his sleeve. It's something like the first writing a child tries to do.



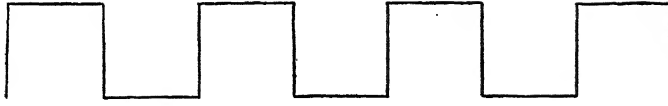
The next simplest is the *scallop*. It is called that because it is like the edge of the scallop shell. It's like this:



or upside down like this:



The *embattled* is like this:



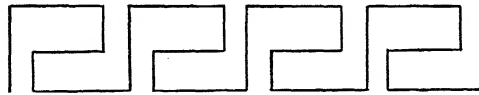
The embattled border is sometimes called the Wall of Troy, because Troy had a wall around it, with spaces through which the soldiers could shoot their arrows, and pieces of wall behind which they could jump.

The *meander* is like this:



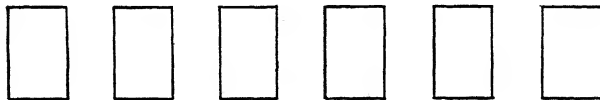
The Meander was a river in Asia Minor that flowed in this very crooked way. If you go to school walking in a line that makes a design like this, we say you are meandering.

The *fret* or *key* is like this:



It looks something like a row of keys.

The *dentil* is like this:



because “dentil” means teeth and it was supposed to look like a row of teeth. It looks something like a row of piano keys, too.



The *wave* is like this, something like an *S* lying down with a curl or scroll in one end. Of course you can see why it is called this if you have ever seen waves breaking on the shore. When I was a boy I used to make my capital *S*'s with many scrolls in each end until my teacher made me stop.

The *running scroll* is like this:



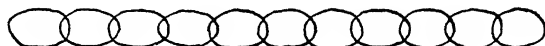
—one wave up and one down. This is one of the prettiest borders.

The *astragal* is like this:



Astragals were really little bones, but the astragal border looks to me like a string of beads—long beads with two round beads between them.

The *chain* is like this:

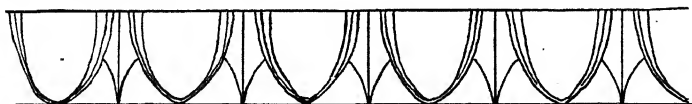


—not a very pretty border, do you think so?

The *cable* or *rope* is like this:



The *egg and dart* is like this:



The egg was supposed to represent birth; the dart, death—birth and death, birth and death. Every man is born and dies. His son is born

and dies. Generation after generation is born and dies, forever and ever. The astragal was always used below the egg and dart border.

The *Lesbian leaf* is like this:



The *anthemion* is like this:



—leaves arranged in a heart shape.

The *Greek lily* is like this:



The anthemion was often used with the Greek lily alternating.

These are called classic borders because the Greeks and Romans used them and anything Greek and Roman we call classic.

The next time you draw or mount a picture, suppose you try making a border for it of one of these classic designs. It's fun. I've known boys to make such borders round the letters they wrote, round Christmas cards and even round their arithmetic papers, and some girls have embroidered handkerchiefs and towels with these designs, but they have to be done very carefully to look just right—one part exactly like every other, evenly spaced and in line.

CHAPTER 9

EARLY CHRISTIAN

IF YOU get up in the morning at sunrise you might call yourself an early Christian. But *early Christian* in architecture does not mean early in the day; it means early in the history of Christians. Some of our finest buildings to-day are Christian churches, but once upon a time the only Christian churches were holes in the ground.

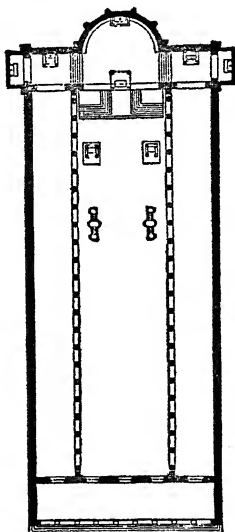
These holes were called catacombs. They were tunnels that were dug underground in Rome because the Christians were persecuted. That means they were punished just for being Christians and so they had to live in hiding. They hid in the dark secret passages of the catacombs. In the catacombs were rooms where Christians could "go to church." There were rooms there, too, where dead Christians were buried safely.

It was like living in a coal mine, only worse, because when a Christian was caught by the Roman soldiers, he was generally given to the lions or burned alive or chopped to pieces. Suppose you had to live down underground and never could come up without danger of getting caught and killed. It might be exciting and fun at first, but when you found some of your friends or perhaps even your brother or your aunt or your father had been carried off and put to death, it would not be fun at all.

So you can imagine how glad the Christians who lived in the catacombs must have been when the Roman emperor himself became a Christian.

This first Christian emperor was named Constantine. When Constantine became a Christian, naturally the Christians could come up

out of the catacombs and worship God above ground. The Christians found the best kind of buildings above ground for their church services were the basilicas. You remember basilicas were the buildings built by the Romans for court-houses. In the court-houses the judge sat in the middle at one end, with his back toward the end wall. In front of the judge was a long aisle with columns on each side and this aisle led to the front door. On each side of the main aisle was another aisle. Here is a plan or kind of map of a basilica. Make believe you are looking



*Courtesy of The
University Prints*

PLAN OF A BASILICA

straight down from an airplane at the basilica and that the basilica has its roof taken off. The lines are the walls and the dots are the columns. The place where the judge sat is the half circle at the top of the plan.

You can have some fun with paper and pencil, making a plan of your own house. If you imagine everything above the first story taken

off the house, you could make a plan of the first floor. If your house has three floors, you might make a plan for each of the three. When I was a boy I used to like to draw plans of make-believe houses and I generally had a swimming pool and a gymnasium and a soda water fountain in my make-believe plans.

But let's get back to the basilica. The Christians used the judge's half circle in their basilica church for an altar and for the minister or priest to preach from. This part of the building had lattice-work railings in front of it called *cancelli* by the Romans. That's why some churches still call the minister's end of the church the chancel. The people who came to worship in the basilica sat on benches facing the chancel—just as they do in some churches to-day. The main central part of a church is called a nave. The chancel and the aisles on the side are not part of the nave.

The windows in a basilica were way up near the roof. The center part, or nave, was higher than the side aisles and so the center part's roof was higher than the side aisle roofs. The nave was really two stories high and the side aisles only one story high. The windows were in the second story of the nave. This part with the windows was called the *clerestory* which means clear story. I think you can guess why it is called that.

From the outside, these basilicas weren't much to look at. A good many of them looked more like big barns than anything else. But inside they were magnificently decorated. The columns were beautiful marble ones taken from old heathen buildings. The walls had mosaic pictures on them made of little pieces of stone or of colored glass which shone like jewels. The floors and lower walls were covered with fine slabs of marble. After the catacombs they must have seemed all the more magnificent to the early Christians.

The largest of these early Christian basilicas is the church of St. Paul-without-the-Wall. You might think from its name that it didn't have any walls. What its name really means is that the church of

St. Paul is outside the wall of Rome. It has a main part, or nave, and *two* aisles on each side instead of one on each side. Here is a picture of the inside looking along the nave toward the chancel.

You can see the clerestory windows very plainly. St. Paul-without-the-Wall was built, way back in 380 A.D. and people worshiped there



Courtesy of The University Prints

INTERIOR OF ST. PAUL-WITHOUT-THE-WALL

for more than 1400 years. Then in 1823 it caught fire and burned down. But it was built again just the way it was before the fire and so you can still visit it when you go to Rome.

This chapter has four new hard words. See what score you can make

without looking back in the book. Each word you can give the right meaning for—out loud—counts **25**. Can you score 100?

plan (in architecture) ☐

nave ☐

chancel ☐

clerestory ☐

Score

CHAPTER 10

EASTERN EARLY CHRISTIANS

ARE you a good detective? Can you tell what part of the country a person comes from, just by hearing him talk? At least you can tell the difference between a Southerner and a New Englander by the sound of their voices and the way they pronounce their words.

Men of one part of a country talk differently from men of another part. Men from different countries are different in other ways. They wear different kinds of clothes, they have different kinds of laws, they eat different kinds of food, they paint different kinds of pictures, they build different kinds of buildings.


When the Roman emperor Constantine became a Christian, the Christians in Rome came out of the catacombs and built basilicas for churches. But subject to the Roman emperor there were other Christians who lived a long way from Rome. The Roman Empire reached eastward into Asia. Many people in this eastern part of the empire were Christians, too. Under Constantine they began to build churches just as the Christians in Rome did. But, belonging to a different part of the world, the eastern Christians built their churches in their own way. They didn't care much for basilicas.

The kind of buildings the eastern Christians built was called Byzantine. That is because Byzantium was the largest city in the eastern part of the Roman Empire. The city is still a large and important city, but you won't find Byzantium on the map. Byzantium changed its name. Constantine went to live in Byzantium and made it his capital

instead of Rome. When he did this he named the city Constantinople or City of Constantine. But you won't find Constantinople on the modern map, either, for now it is called Istanbul. The old name, Byzantine, however, stuck to the architecture that began to be used there.

There was one very important difference between this Byzantine architecture and the basilican architecture. A Byzantine church always had some kind of dome on it. In some churches the dome was small; in some it was covered with a square roof so you could see the dome only from below, on the inside; in many churches there were several domes.

The Pantheon in Rome has a dome, but the Pantheon is not like the Byzantine style of building. The Pantheon's dome is made of concrete. The domes of Byzantine churches were usually made of bricks or tiles. The Pantheon dome rests on a circular wall. The Byzantine domes cover a square space.

The plan of most Byzantine churches looks like this: . This kind of cross with all the arms equal is called a Greek cross. The central dome was generally right over the square in the center of the cross.

All these Byzantine buildings with domes were quite small until the Emperor Justinian came to rule. Justinian had his architects build the best and finest and biggest building ever built in the Byzantine style. We call it St. Sophia or Santa Sofia, but Sofia was not the name of any saint. *Sofia* means wisdom and the real name of Justinian's church is Holy Wisdom. As most Americans call it St. Sophia, that is what we shall call it here.

See if you can understand how St. Sophia is built. In the middle is a huge dome. This dome rests on the top of four big arches that are shaped like croquet wickets. Each arch stands on one side of a square.

The bottom of the dome rests on top of each wicket or arch.

The spaces between the tops of the arches below the dome are not empty. They are filled in with brick so the bottom of the dome is resting on something all the way round. These spaces between the tops of the arches look like curved triangles pointed downward. The curved triangles are called *pendentives*. I hope you can remember that word *pendentive*. It is the use of pendentives that makes Byzantine architecture very different from other kinds. You won't find any pendentives in the Pantheon in Rome, for instance.

In this picture you can see three of the arches under the dome and two of the pendentives between the arches.



Courtesy of The University Prints

INTERIOR OF ST. SOPHIA

As the dome of St. Sophia is made of bricks, the whole dome isn't held together like a saucer or like the concrete Pantheon dome. This means that the dome pushes down on the walls that hold it up and also pushes outward or sideways on the walls. You know how a ladder leaning against the wall of a room will slide out at the bottom when a heavy man climbs the ladder unless the bottom is braced against something on the floor. Well, the dome pushes out in all directions just as the ladder does in one direction, and so there must be something to brace the walls to keep the dome from pushing them over.

The arches resting on the ground held the downward push of the dome. The architects of St. Sophia took care of the outward push very cleverly. On the outside of two of the arches, opposite each other, they built half-domes on walls reaching to the ground which braced the two arches just like book-ends pushing toward the middle of the building. They were props to hold the arches from falling outward.

Against the legs of the other two arches they built big piles of stone and brick and these piles kept the arches in place just like book-ends, too. These piles were called buttresses.

And then—after all this care and work—the dome of St. Sophia fell down! It collapsed a few years after it was finished. But we can't blame the builders. An earthquake shook the bricks out of place and down came the dome. The builders couldn't prevent an earthquake.

When they put the dome up again they made an improvement. All around the bottom of the new dome little windows were made—forty windows altogether. This let in such a band of light that the dome seems to be resting on light when you look up at it from inside, or as if it were hanging from the sky a few feet above the top of the four big arches.

The inside of St. Sophia has been called the most magnificent interior in the world. Along each side of the nave run aisles which have second stories or galleries. The galleries are supported by many col-



Courtesy of The University Prints

ST. SOPHIA

umns of different colored marbles, some red, some green, some gray or black. Here's a strange fact. There are 107 columns inside the building and the dome is just 107 feet across from one side to the other.

The lower walls are all covered with slabs of beautiful marble, in even more colors than the columns. Higher up on the walls are mosaic pictures with the colored pieces of glass and marble set in gold.

Almost a thousand years after the church of St. Sophia was built, Constantinople was captured by the Turks. The Turks are Mohammedans instead of Christians. They worship in mosques instead of churches. The leader of the Turks rode his horse right into St. Sophia and ordered the Christian church turned into a Mohammedan mosque. The beautiful Christian mosaics were covered with plaster and white-wash except for a few of the angels. And ever since then no one has been allowed to enter St. Sophia without first taking off his shoes. That is the rule for all mosques. No shoes may tread on Mohammed's holy ground. You take off your shoes or you don't get in.

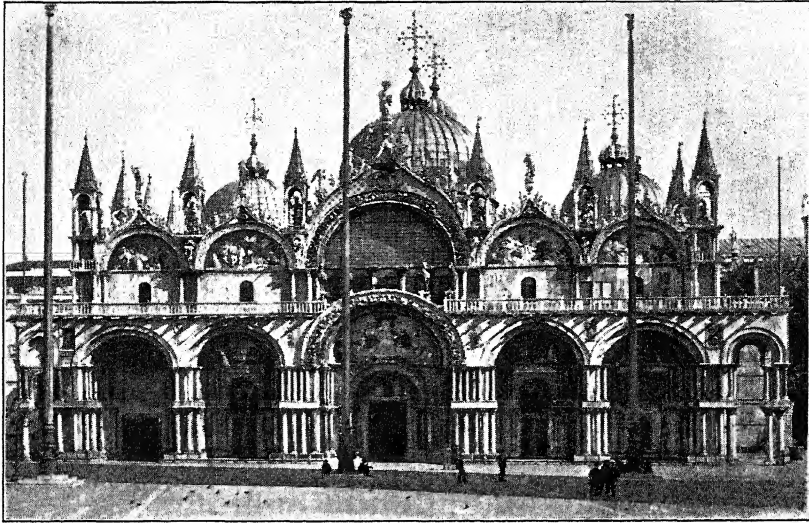
From the outside St. Sophia looks big, but some people think it not very beautiful. Notice in the picture the great buttresses that stick up on each side of the arch to brace the push of the dome.

What about those towers? I wish you could forget they are there, because they look so important in the picture that you are apt not to look closely at the building itself. The towers were not part of the church, but were put on by the Turks when the church became a mosque.

But I don't want you to believe that St. Sophia was the only great Byzantine building or that all Byzantine buildings were in Constantinople. The Byzantine style of architecture spread wherever the religion of the Greek Christian Church spread. The churches of Russia, for instance, were almost all built in the Byzantine style because the Russians became members of the Greek Church instead of members of the Roman Church. Churches in the Byzantine style are still being built in different parts of the world.

Just as famous as St. Sophia is another Byzantine church built in Venice, hundreds of years after St. Sophia. Venice was a seaport republic. The city belonged to no country. It was independent. Fleets of ships from Venice sailed away to the East and brought back the beautiful silks and spices of Asia. Venice became rich and powerful. Her people learned to love the bright colors of the goods from the East and they put so much lovely color on their Byzantine church that it shone like a beautiful jewel in the sun. They called their church St. Mark's because it was built over the spot where Saint Mark was supposed to lie buried.

St. Mark's has five domes—a big dome in the center and four smaller domes around it. The domes were not high enough to be seen well on the outside and so the Venetians made a much higher dome over each of the five domes. So each dome is double. The church is covered inside and out with brilliant mosaics and slabs of precious marbles called alabaster brought from far and near. The four bronze



Courtesy of The University Prints

ST. MARK'S, VENICE

horses over the main door are almost as famous as the church itself. It is probably the most colorful building in the world.

And now one more score card. Here are the new names in this chapter. Each counts 20. Can you spell them correctly and make as good a score as in the last chapter? Try it—out loud, remember.

| | |
|-------------|--------------------------|
| Byzantine | <input type="checkbox"/> |
| Greek cross | <input type="checkbox"/> |
| pendentive | <input type="checkbox"/> |
| buttress | <input type="checkbox"/> |
| mosque | <input type="checkbox"/> |

Score _____

CHAPTER 11

LIGHTS IN THE DARK

“**W**HAT goes up must come down.” The Roman Empire had reached the height of its power. The Romans had conquered, ruled, and civilized almost all of Europe. Then the mighty empire that the Romans had built up came tumbling down.

It began with the split between the eastern part of the empire and the western. When the capital was moved to Constantinople, naturally Rome, the old capital, lost power. Finally the East and West separated. Constantinople remained the capital of the Eastern Roman Empire. Rome was capital of the Western Roman Empire. So then there were two Roman Empires and two emperors. But this didn't last long.

Savage men from the North began pushing and fighting their way down across France to Italy. These men were fierce and rough. They had never learned to read or write. We call them Teutons. The Teutons finally overran France, Spain, and Italy. They took Rome itself, and that ended the old Roman Empire in the West. I wonder what the Teutons thought when they entered Rome and saw the great palaces and theaters, the temples and monuments.

The Teutons were rude and rough and ignorant. But they were strong and brave and good fighters. They became Christians. Gradually they learned the languages of the parts of Europe where they settled. All parts of the Roman Empire had once upon a time spoken Latin, the language of Rome. Now under the Teuton tribes the language of each part of Europe became different. The Latin used in France gradually became French. The Latin used in Spain became Spanish, and the Latin used in Italy and in Rome itself became

Italian. No longer could a man from Spain talk with a man from France in his own language.

But Spain and France and Italy did not become real nations right away. Everywhere there was fighting, everywhere mix-ups. One tribe fought with another. One town fought with another town. The old civilized life was upset. Everything became darker and darker for civilization. The ways of the Romans were forgotten. There would have been no time for architecture, on account of so much fighting, even if almost everybody had not forgotten what architecture was. The old basilican churches were still used, but few new ones were built. Things got so bad that we call the time from about 500 A.D. to about 1000 A.D. the Dark Ages.

Now, although everything certainly looked black for Europe, there *were* a few lights to be seen in the darkness. One bright spot was the reign of Charlemagne. Charlemagne was a Teuton. He grew up uneducated and he never learned to write. Can you imagine a ruler nowadays—the President of the United States, for instance—who couldn't write a letter? But Charlemagne had a good mind and he wanted to learn all there was to know. He became King of France, but he wasn't satisfied until he had brought Germany and Italy under his rule, too.

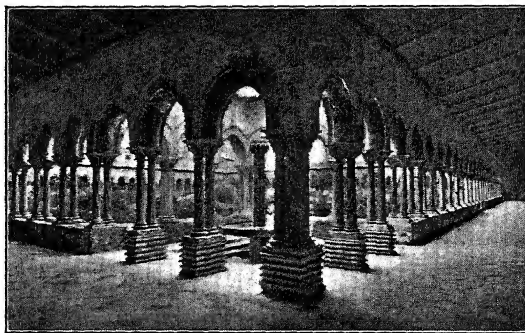
Charlemagne encouraged building. He brought to his court all the wisest men he could find. He helped get back for the world some of the knowledge and learning that had been lost when the old Romans ceased to govern. He was crowned emperor of a new Roman Empire in 800 A.D.

Another light, flickering in the Dark Ages, was kept burning by the Christian monks. As you know, monks are men who live in monasteries. A monastery was ruled by a chief monk called an abbot. The monks thought they could live better lives if they worked hard and kept away from all the fighting and badness going on in the world.

Those old monks worked hard in the monasteries. They raised vegetables, built churches and houses, taught school, made paintings, wrote histories, helped the poor and sick people who came to them. Best of

all for you and me, they studied the old Roman writings and kept them safe, so that we can know much more about the old Roman ways than we could if it hadn't been for the learned monks.

The monastery that the monks lived in was built around a church. Such a church was called the abbey because of the abbot who ruled the monastery. On one side of the abbey was a courtyard. Across the courtyard from the church was generally the dining hall, which was called the refectory. The church and the refectory were connected along each end of the courtyard by hallways. These hallways were like long porches with columns on the sides facing the courtyard, and were called cloisters. The columns in the cloisters were not like the old Greek and Roman columns. They weren't Doric or Ionic or Corinthian or Tuscan or Composite, but were of many different shapes, even in the same cloister. Some were twisted in shape like a screw or like a wet towel when you try to wring the water out of it. Some were decorated with bands around them or with criss-cross stripes. In many cloisters the columns were in pairs, two and two, like animals going into Noah's ark, and these were called coupled columns. Not much like the columns on the Parthenon, are they?



Courtesy of The University Prints

CLOISTER, SICILY

CHAPTER 12

ROUND ARCHES

SUPPOSE you thought the world was going to end next year! Most people in Europe in the Dark Ages thought the world was going to come to an end in 1000 A.D. They weren't sure just how it would happen. Perhaps it was going to burn up, they thought, or fall apart or blow up with earthquakes and volcanoes. But they felt sure from what they read in the Bible that 1000 A.D. was going to see the end of the world. Important buildings were not built, because what was the use? They'd all be destroyed with the end of the world.

Then 1000 A.D. came and nothing happened to the world. Still the world was there, and so people found they must have been mistaken. More good buildings began to be built. The light in the darkness of the Dark Ages began to get brighter.

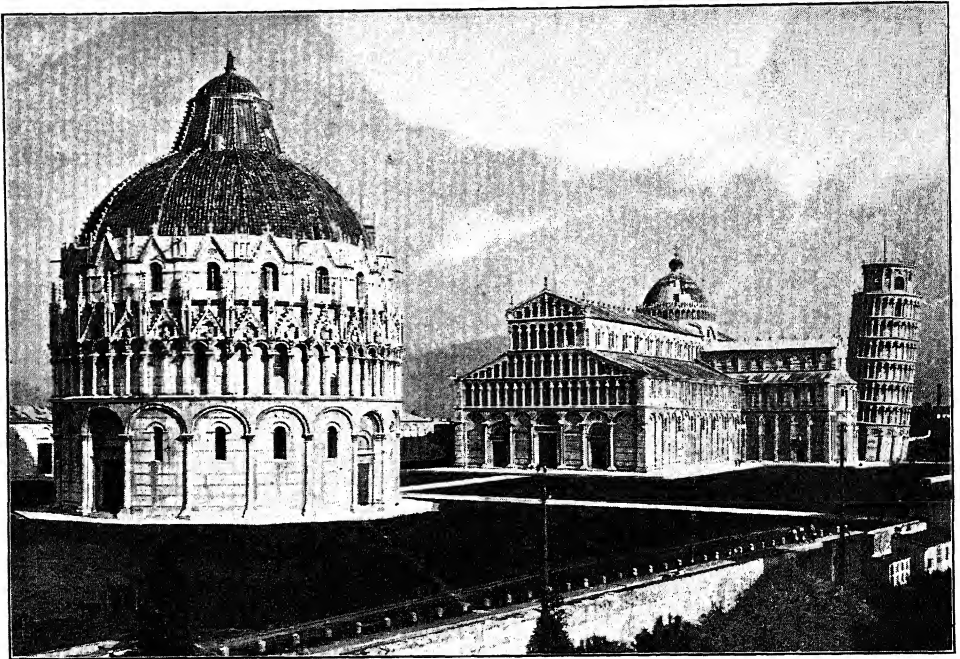
And now I'll have to tell you of the new kind of architecture that was used after 1000 A.D. This new kind of architecture is called Romanesque. The easiest way for you to tell that a building is Romanesque is to look at the tops of the windows and doors. If all the windows and doors have round arches for tops, then the building is probably Romanesque.

People call it Romanesque because it was used in the countries that once belonged to Rome. Just as each of these former Roman countries came to have its own language, descended from Latin, so each country came to have its own Romanesque architecture, descended from Roman architecture.

The Romanesque architecture of Italy is most like the old basilican

kind and so I'll tell you first about the most famous Italian Romanesque buildings.

I'm sure you know the tower in this picture. It is the famous Leaning Tower of Pisa. The building next to the tower is the cathedral.



BAPTISTERY, CATHEDRAL AND LEANING TOWER, PISA

Every church isn't a cathedral. A cathedral is a church with a bishop. The chair that the bishop used in his church was called a *cathedra*. As the bishop's church always had a cathedra, the bishop's church was called a cathedral. This was the cathedral of the Bishop of Pisa.

If you were to look down on a cathedral from an airplane you would see it was built in the shape of a cross. But this cross isn't a Greek cross, because all the arms are not the same length. A cross with the main stem longer than the other parts is called a Latin cross. Most Romanesque churches were built in the form of a Latin cross. The top of the cross was always pointed toward the east so that the altar in that end of the church could be nearer Palestine in the East, where Christ was born.

The outside of the cathedral at Pisa is worth looking at, especially if you make believe you are a detective and can see things that most people don't notice. The rows of columns with arches over them are called arcades. A detective would notice at once that all the arches are round arches, and so he could guess the building is probably Romanesque. There are four of these rows of arches or arcades on the west end of this cathedral.

And here is something I don't believe you'd notice unless you were a very good detective. Each arcade is a different height. The third arcade from the ground has the tallest columns. The arcade next to the bottom is not quite as tall, the top one is still shorter, and the bottom arcade has the shortest columns of all. A very, very good detective would notice that the middle arch in the two arcades nearest the ground is bigger than the other arches.

Now look even more closely. A very *extra* good detective would see that the columns in the two top arcades are not always exactly over the columns below them.

All these differences were not just accidental. The arcades were built that way on purpose. If all four arcades had been just alike they would have made the whole front of the cathedral look tiresome, monotonous, uninteresting.

Now if you will look at the Leaning Tower, you can see that all the arcades *are* just alike. For that reason, the tower isn't so beautiful as the cathedral. Many people even call the tower ugly. I don't think

it is ugly, but I certainly can't say it's as pleasing to look at as the cathedral, though you may find it more interesting on account of the way it leans. The Leaning Tower was built later than the cathedral. Maybe by then the architects had forgotten why the cathedral arcades were not built all alike.

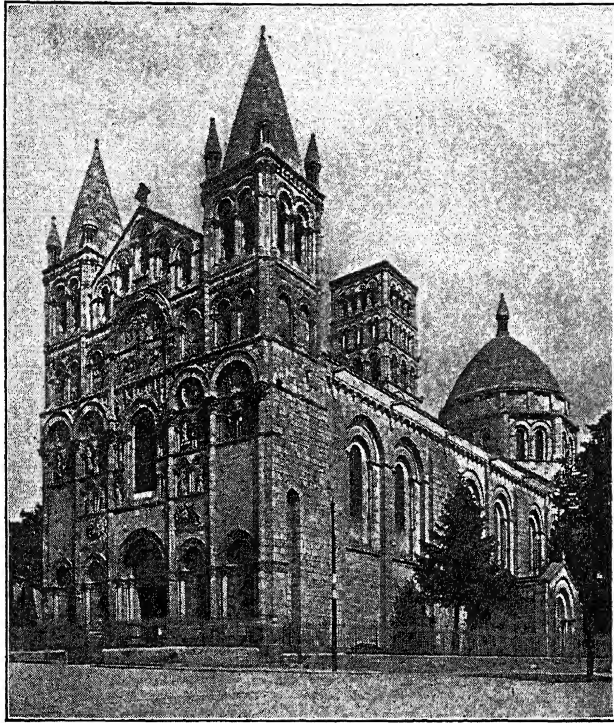
The tower started leaning almost as soon as it was begun. Before the first story was finished, the foundations on one side were much lower than on the other, so work on the building was stopped. But, after several years, another architect managed to get three more stories built before he had to stop on account of the slant. Still later another architect finished the tower. But some people have said the tower was meant to lean in the first place so it would be different from other towers.

It is true that each city in Italy was trying to get ahead of every other city with buildings that would attract attention. But most people now believe the foundations sank in soft ground on one side and that the lean of the tower was an accident. The top of it leans about fourteen feet out over the bottom. There are seven bells in the top and the heaviest bell is kept on the side away from the lean to help balance the tower.

Near the cathedral stands a circular building called the Baptistery of Pisa. The Baptistery was built to baptize the people in. It was changed a great deal in looks after the Romanesque period was over, because later architects thought they could make it look better than it looked at first.

A good example of a Romanesque building in France is the Cathedral of Angoulême. The front, as you can see in the picture, is decorated with sculpture. Notice the round arches that belong to all Romanesque buildings.

In England, the Normans who came over with William the Conqueror built many stone churches, cathedrals, and castles. Norman buildings are Romanesque just as much as the French and Italian,



Courtesy of The University Prints

CATHEDRAL OF ANGOULÊME, FRANCE

but they are usually called Norman buildings instead of Romanesque. Very little of the Norman Romanesque looks now as it did when the Normans built it, because later builders kept adding to it and changing it. Often some parts of an English church are Norman, while later parts of the same church are not Norman style at all.

Germany also has some fine Romanesque cathedrals and churches. And they all have arcades and round arches over the windows and doors. And that's really the big thing to remember about Romanesque buildings—round arches and arcades.

CHAPTER 13

CASTLES

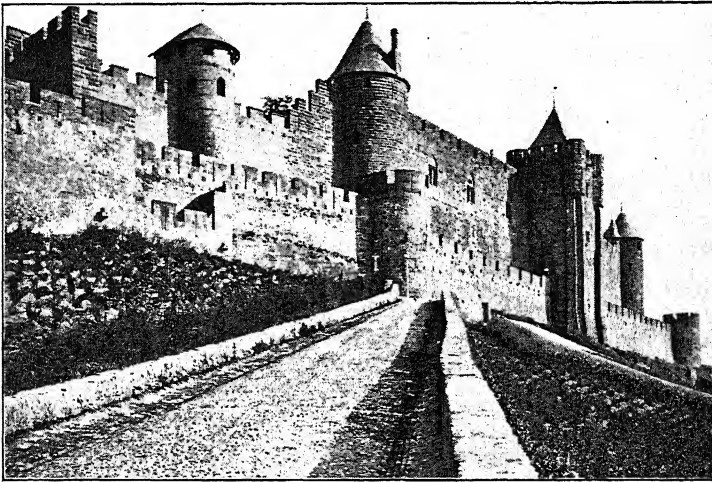
ONCE upon a time there lived a very wicked ogre. He lived in a strong castle set on the top of a hill, and whenever any traveler was unlucky enough to pass along the road below the castle, down would come the ogre and carry the traveler off to his donjon tower.

That sounds like the beginning of a fairy story and that is just what it is. But there is more truth than you might think in a fairy story. In the Middle Ages, when people believed in fairies and ogres, there were many real castles—most of them built on the top of a hill. And although there were no real ogres, there were, I'm sorry to say, bad men living in some of these castles who would really lock up in their donjon towers any one from whom they thought they could get money. Of course not all the knights who lived in the castles were bad. But most of them were warlike and fierce and all the old castles had dungeon cells for prisoners.

These castles were built because of the Feudal System. The Feudal System worked like this. The king or prince who conquered a country would divide the country up among several of his lords. These lords would then divide their parts of the land up among other lords, and these would divide their share again among the knights. Each lord and knight had to promise that he would help the lord from whom he got his land whenever the lord needed him. Then each lord and knight built himself a strong castle to protect his part of the land from any one who might try to take it away from him. There were no policemen

in those days to keep one man from trying to steal another man's land, and so each knight had to have his own soldiers and his own castle to protect his rights.

Near each castle was a village where the common people who were not lords or nobles lived. These people were not very well cared for. They lived in miserable little huts. Most of them had to give part of all the food they raised to the lord of the castle, and all the men had



Courtesy of Pratt Institute

THE FORTIFICATIONS, CARCASSONNE

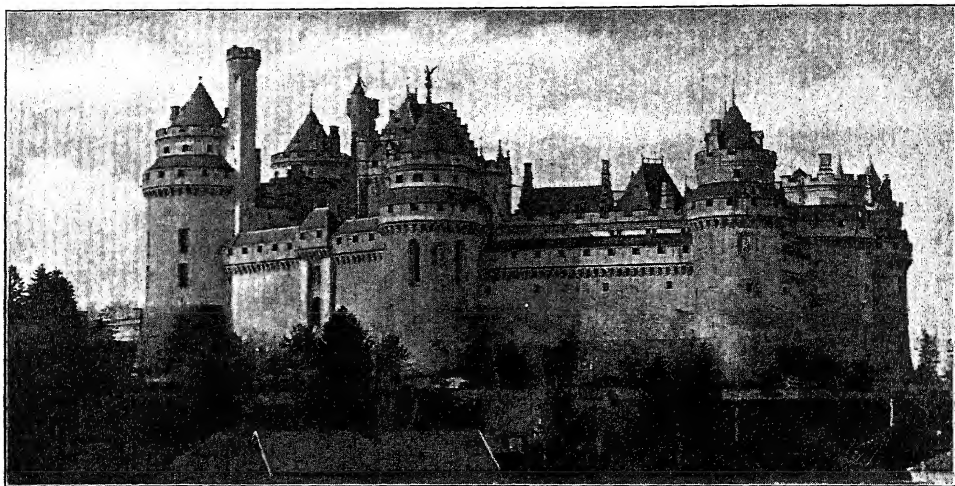
to serve the lord as soldiers whenever he needed them. In return, the lord of the castle protected the poor people from enemies.

The castle was built with great, thick stone walls all around it. Outside of the wall was a deep ditch of water called a moat. The only way to get into the castle was across a drawbridge over the moat. The drawbridge could be drawn up from inside the castle so that an enemy could not enter. If the enemy reached the drawbridge before it was drawn up, he found his way blocked by a huge latticework gate, called a portcullis, which was dropped across the gateway of the castle.

The castle had huge stone towers at the gateway and along the wall, with very narrow slits for windows. Archers could shoot arrows out of these slits, but the slits were hard to shoot through from the outside.

Inside the walls there was a courtyard around which were the stables, soldiers' and servants' quarters, kitchens, and a high tower called the keep. In the keep the lord of the castle lived. There was a large dining hall and often a little church or chapel in the keep. And down below the ground level were the prison cells and torture chambers. In case of an attack, all the people of the village came into the castle, often with their cattle and flocks, and stayed there, so there had to be great stores of food on hand.

Here is a picture of the Castle of Pierrefonds in France. Notice how few windows there are in the lower walls. Pierrefonds gradually fell to pieces until it was restored about fifty years ago.



Courtesy of The University Prints

CASTLE OF PIERREFONDS

CHAPTER 14

POINTING TOWARD HEAVEN

NOW I'm going to tell you about a kind of architecture named for some people who never had any architecture. All they ever built was huts. Yet the kind of buildings named for these people is one of the greatest styles of architecture in the world.

That certainly seems strange, doesn't it?

The people who didn't know how to build anything but huts were the Goths. The beautiful architecture that the Goths hadn't anything to do with is called Gothic architecture. Why in the world is it called Gothic architecture, if the Goths didn't have anything to do with it?

The reason is a strange reason. We think nowadays that Gothic architecture is very wonderful, and we think the Gothic buildings very beautiful. But, strange as it may seem, there were people who despised these beautiful buildings. They thought any architecture that didn't come from Greece or Rome was no good. They thought it was crude and rough and uncivilized. The crudest, roughest, and most uncivilized people they could think of were the Goths who had conquered Rome, and so they called this beautiful architecture Gothic, not only to show how crude they thought it was, but because they thought the Goths had begun it. Like most bad names, it stuck.

Gothic architecture grew out of the Romanesque architecture. The builders kept trying to make stone ceilings over the naves of the churches because stone was safer from fire than wood was. At first the stone ceiling was a barrel vault, shaped like the side of a barrel. The barrel vault took a great deal of wooden centering to build, be-

cause the vault was quite long and each part had to be held up by the centering till all the stones were in place. The centering took so much wood that it was a great discovery when some one found a way of building vaults with very little centering. This discovery was to build two curved ribs like arches or parts of hoops that crossed in the middle of the vault. These two ribs were built first and then the rest of the vault could be put in a little at a time.

Then another discovery was made. This was that a pointed arch was better sometimes than a round arch. It wasn't really a new discovery, for the people in Asia Minor had used pointed arches for many years. The knights brought the idea back to Europe when they returned from their Crusades in the Holy Land. You might not think such a little thing as making an arch pointed on top instead of round would be important. But important it was, and this is why.

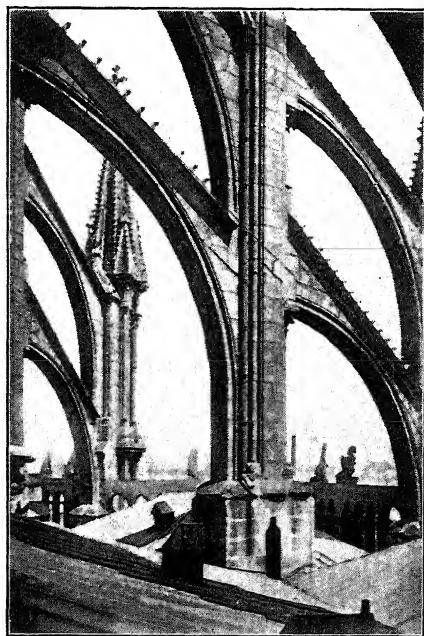
A round arch has to be just as high as it is wide. The wider the opening it has to cover, the higher the round arch has to be. But a pointed arch is different. You can build a pointed arch as high as you want or as low as you want, no matter how wide the opening is that it has to stretch across. If you will put your finger tips together so they form an arch you can prove this. If you keep your hands the same distance apart you can only form one round arch with your fingers. But you can form pointed arches of several different sizes by curving your fingers and keeping your hands still.

The builders of the stone cathedrals found it much easier to build vaults over a wide nave or aisle with pointed arches instead of round arches.

Of course these stone vaults pushed down on the walls and also pushed sideways. So the walls had to be very thick and very well braced with buttresses. But the builders found that when they used ribbed vaults instead of plain barrel vaults, most of the side push came just at the ends of the ribs. They found that if they put heavy buttresses at the ends of the ribs, the rest of the wall could be made

very thin. The walls between the buttresses finally became so unnecessary for holding up the roof that they were made of glass. The walls became walls of glass between buttresses of stone.

Not only did the walls get lighter, but the buttresses changed. You couldn't really say the buttresses learned to fly, but they are called flying buttresses. A flying buttress is one that leans against the wall like a prop—like a man pushing against a wall with a stick. Flying buttresses press against the top of the walls and keep the walls from being pushed over by the weight of the vault and the roof.



Here is the picture of flying buttresses on a cathedral in France.

These three discoveries—the ribbed vault, the walls mostly of glass between buttresses, and flying buttresses—are the three most important things to remember. When these three things had been dis-

covered, there finally came that beautiful and marvelous kind of architecture known as Gothic—but not because the Goths had anything to do with it, remember.

Gothic architecture was as different from the Greek and Roman as it could be. The Greek and Roman buildings were solidly set on the ground. Almost all the weight pushed straight down. But a Gothic cathedral was a balance of all sorts of thrusts and pushes and forces. Where there was a side push, there was a buttress to push against it.

In the Greek and Roman temples most of the lines ran lengthwise. They were horizontal buildings. The Gothic cathedrals climbed into the air as though reaching up toward heaven. Most of their lines seem to carry the eye upward from the ground. Every part of the building helped to do this. Think of the pointed arch, for one thing. A Gothic cathedral was like a hymn of praise rising to God.

CHAPTER 15

IN PRAISE OF MARY

BIG buildings nowadays take only months to build. Big Gothic buildings often took hundreds of years to build. One Gothic building, Cologne Cathedral, took more than six hundred years.

The most important Gothic buildings were the cathedrals. When "Gothic" is mentioned, most people think of France, for France has some of the finest Gothic cathedrals in the world.

The Gothic cathedrals were built with loving care. Every one in the village and the surrounding country did his bit for the cathedral. The stones were shaped and set in place by the members of the guilds, which were clubs of workman. The guild would not let any work pass that was not good work. There was nothing "fake" about a cathedral. The stone carvings 'way up in the roof were just as carefully made as if people could get near enough to examine them.

Perhaps this is why the Gothic cathedrals rate next to the Greek buildings as the world's most wonderful examples of architecture. The men who built the Greek temples and the men who built the Gothic cathedrals left behind them very different kinds of architecture. But they were alike in the honesty of their work.

Most of the French Gothic cathedrals were built to the glory of Mary, the mother of Christ, who in French was called Notre Dame—Our Lady. There were so many cathedrals of Notre Dame built that we generally call the cathedral simply by the name of the town it is in, such as Chartres or Rheims. But if anybody speaks of just

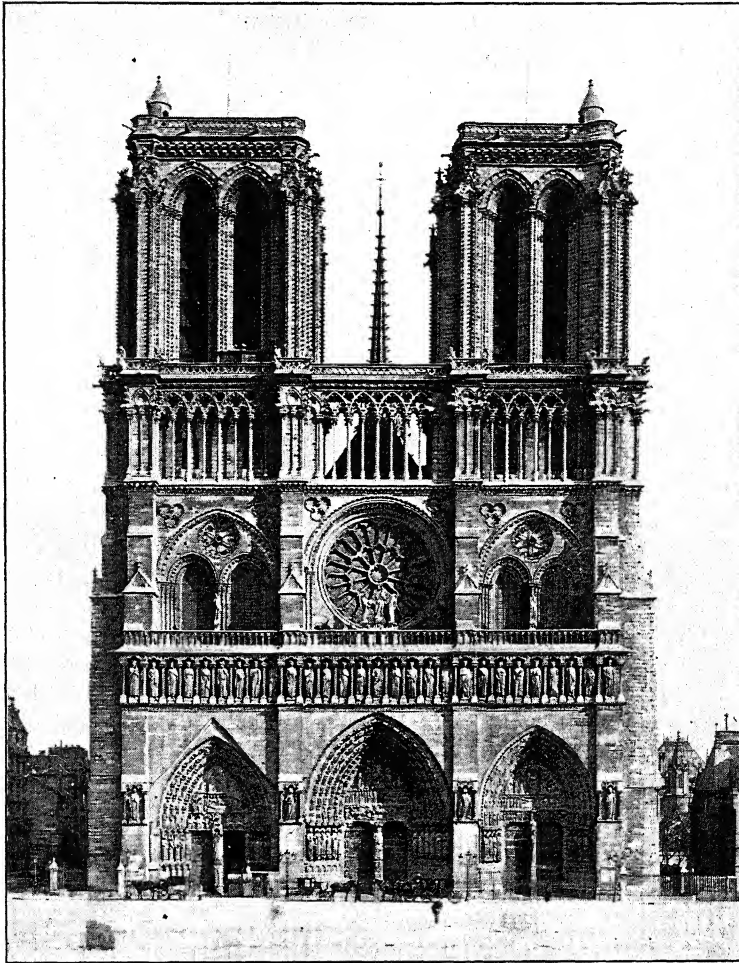
the Cathedral of Notre Dame, he usually means Notre Dame of Paris.

Notre Dame of Paris has on the west end—the end opposite the altar—two large towers. Beneath the towers and in the center are the doorways, one to the nave and one to each side aisle. The doorways are covered with rows of statues of prophets and saints, the head of one statue below the feet of another. Above each doorway is a row of very large statues of kings. Above the kings is a huge round window called a wheel window or rose window. The rose window is filled with brilliant colored pieces of glass that cast a soft purplish glow inside the church.

This cathedral in Paris is in the form of a Latin cross. Almost all the Gothic churches are. The arms of the cross are called the transepts of the cathedral. The place where the transepts cross the nave is called the crossing. Over the crossing was built a tall slender spire. You can see this spire between the towers in the picture.

The front of a building, like the front of Notre Dame which you see in the picture, is called the *façade* (fas-sahd). *Façade* means about the same thing as face. Now, Notre Dame of Paris is supposed to have the finest *façade* of any Gothic cathedral in the world. In fact, each of the great cathedrals of France has some part that is considered the best in the world. What a building it would make if the best of each cathedral were taken and all the bests put together to make one best cathedral! But perhaps such a building wouldn't be as interesting, after all, as the separate cathedrals. There is such a thing as being too good.

The towers with their square tops on the cathedral of Paris were meant to have tall spires on them. But by the time the cathedral was ready for the spires, so many years had gone by that the spires were never built. On some cathedrals one tower was built and the other never finished. On one very fine cathedral the spires were put on at different times, so that they are not alike. This is the famous Cathedral of Chartres.

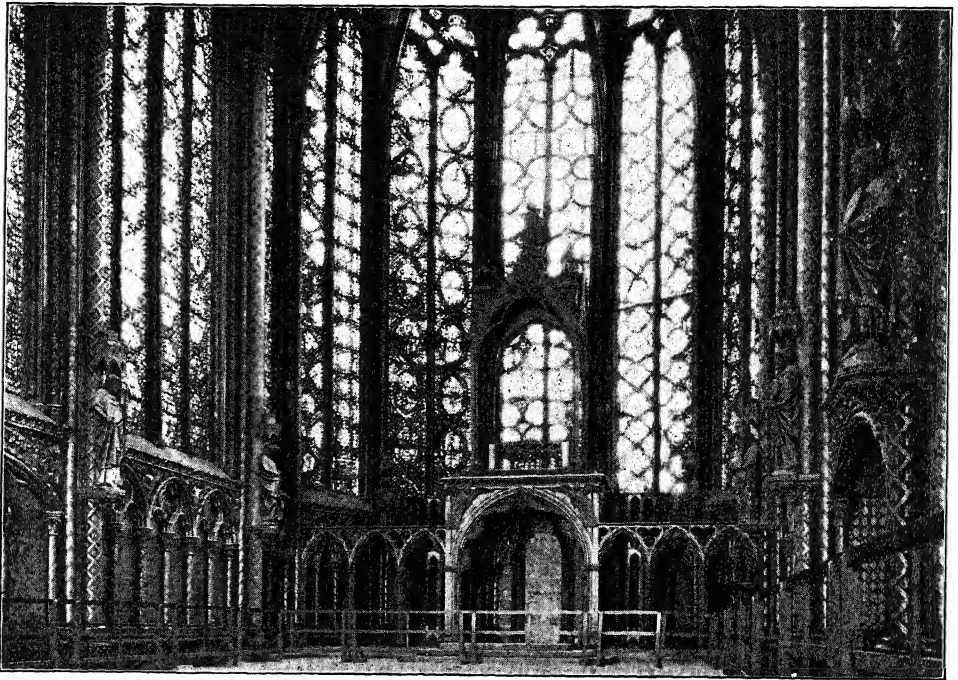


FACADE OF NOTRE DAME, PARIS

Chartres is a little city about sixty miles from Paris. The Cathedral of Chartres is noted not only for its two spires but for the wonderful stained glass windows in its walls. You remember I told you that Gothic churches had walls of glass. This glass was made in brilliant

color to show Bible pictures. The sunlight streaming through the colored glass has a marvelously beautiful effect on the interior. Instead of the glass of Chartres Cathedral, however, I'm going to show you a picture of the interior of a church in Paris called the Sainte Chapelle so you can see how much of the wall space is glass. The stone parts, as you can see, are hardly more than a framework for whole walls of glass.

The glass was held by stone framework in the windows, and the separate pieces of glass were kept in place with strips of lead. The



Photograph by Ewing Galloway

INTERIOR OF SAINTE CHAPELLE, PARIS

stone framework holding the glass in the windows is called tracery.

As new Gothic cathedrals were built, the tracery was made in different shapes. Often the shapes of the tracery is a good way to tell in what period the cathedral was built.

Rheims Cathedral is thought to have the best portals or doorways. It also is famous for its proportion or shape as a whole building. And many of the carved stone statues that are all over the building are famous. Unfortunately this beautiful cathedral was in the fighting area during the World War and the German shells that struck it damaged it terribly. After the war the damage was repaired as carefully as possible, so that Rheims looks almost the same as before.

Fortunately this cathedral could be repaired, but many of the beautiful buildings of the past have been destroyed in wars or so badly damaged that they could not be repaired. The wonderful Parthenon, you remember, was blown up by an explosion during a war.

The best Gothic nave is thought by many to be the nave of the cathedral at Amiens. So now let's see what we have best from these cathedrals:

The façade of Paris

The nave of Amiens

The doorways of Rheims

The statues of Rheims

The spires and glass of Chartres

Northern France has many Gothic buildings. Almost every town has its Gothic church or cathedral. The cathedrals were built to the glory of God and all the people added what they could to the glory of the church. All the art of the Middle Ages was found there. Paintings and stained glass, sculpture and architecture, music and tapestry, jewels and precious metals for the altar—all were part of these great buildings or of the religious services held in them. So suited for a church is the soaring Gothic style that even to-day many people think that no style of building is better for our modern churches than the Gothic.

CHAPTER 16

COUNTRY CATHEDRALS

DID you notice in the pictures in the last chapter that all the cathedrals seem to be in cities? Almost all the French Gothic cathedrals are in cities or towns. They have very little open ground around them. Dwelling houses and shops are crowded about them so close that it is often hard to get a good view of the outside of a French cathedral.

English Gothic cathedrals are just the opposite. They were generally built out in the country, so most of the English cathedrals have plenty of open space around them—lawns and trees instead of stores and crowded streets. They stand in beautiful settings which make the buildings themselves look even more beautiful.

Now, a good question is, why should cathedrals be in the cities in France and in the country in England?

Well, in France the cathedrals were built by the people of the towns. They were used much more often than a church is used now. The French cathedrals were the schools, the theaters, the public meeting places of the people, besides being houses for prayer and worship. They had to be in the center of things, because they were so important in the lives of the people of the towns.

But in England the cathedrals were usually built by the monks for their own use. The village people had parish churches where they could worship. Of course ordinary people *could* worship in the cathedrals, but the cathedrals were built chiefly for the monks. As monasteries were places where the monks could get away from the world

outside, so monasteries were more often built in the country away from the cities. And of course the monastery or abbey church was built in the country, too.

That is one difference between English Gothic and French Gothic—one in the country, the other in the city.

Here is another difference.

English cathedrals are much longer for their width than French cathedrals are. An English cathedral looks long and narrow, while a French cathedral looks short and wide. The eastern ends of the English cathedral where the monks worshiped had to be much longer because there were so many monks. The French cathedrals with their crowds of people who came to listen to their priest, needed a wider and shorter space so all the people could hear him. Each country shaped its cathedrals to fit the use to which the cathedrals were put.

Here is another difference.

Most of the French cathedrals have doors at their western ends opening into the nave and aisles. Most of the English cathedrals have doors at the side, besides those at the end, with little porches to keep out the wind and rain.

And here is yet another difference.

Most of the French Gothic cathedrals have two towers on their western ends above the doors. But many of the English Gothic cathedrals have their main tower over the crossing of the transept and nave, and sometimes no towers at all on the western end.

So you can see again very readily that the same kind of architecture is different in different countries. No doubt an Englishman thinks English Gothic is best, and no doubt a Frenchman prefers French Gothic.

An important thing to remember about Gothic cathedrals is that few cathedrals were built all at one time. In many cases the cathedral was begun as a Romanesque building and finished as a Gothic building, years later. The great Durham Cathedral, which was built in

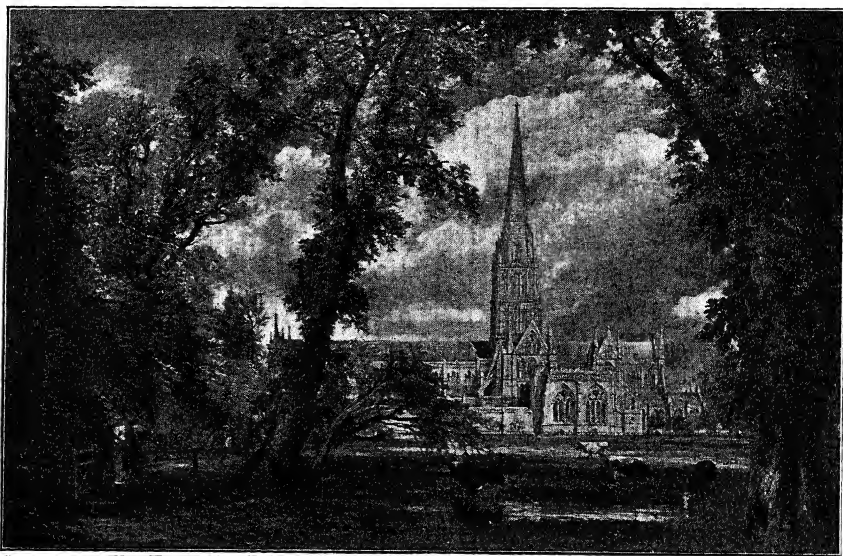
England as a fort against the Scotch as well as a church, has a Norman nave but Gothic towers.

Durham is plainer, less decorated on the outside, than other cathedrals and for this reason it looks strong and solid and is very dignified.

As time went on, the Gothic style changed in England. There are really four kinds of Gothic there, corresponding to four different periods of time. Sometimes it took so long to build a cathedral that all four periods of architecture can be found in one building.

In the thirteenth century churches were built in *Early English* Gothic. Salisbury Cathedral, which has the tallest spire in England, is Early English.

In the fourteenth century the style was *Decorated* Gothic. The nave and east end of Lincoln Cathedral is in the Decorated style.



Courtesy of The University Prints
SALISBURY CATHEDRAL

FROM A PAINTING BY CONSTABLE



Courtesy of The University Prints

LINCOLN CATHEDRAL, ENGLAND

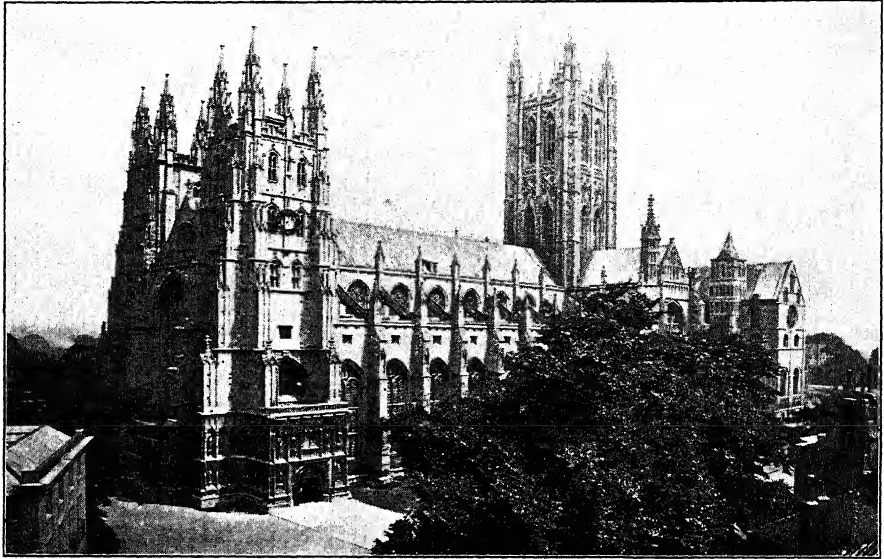
In the fifteenth century the style was *Perpendicular* Gothic. Perpendicular is a long word, meaning straight up and down. The towers of Canterbury Cathedral are Perpendicular Gothic.

And last came the *Tudor* period. The famous chapel of Henry VII in Westminster Abbey is Tudor.

Westminster Abbey itself is more like French cathedrals than most English buildings, perhaps partly because it is in a city—London. It is famous as the burial place of many of England's great men.

If you keep a scrap-book you might try to find for it pictures of two other famous cathedrals. One is Peterborough Cathedral with huge pointed archways over the door—archways that are as high as the roof. The other is Wells Cathedral which has a famous tower over the crossing that I'm pretty sure you will like. If you haven't a scrap-

book, why not get one? You will find it fun hunting for pictures that you want to paste in. You might make it a game to see how long it will take you to get pictures of eight different English cathedrals for your scrap-book. You can find the pictures in magazines and in railroad and steamship catalogues. Then when you go to England some day, each cathedral you see will seem like an old friend.



CANTERBURY CATHEDRAL, ENGLAND

CHAPTER 17

HERE AND THERE

I KNEW a man who spent one summer going on a bicycle from one place in Europe to another, seeing the sights. He was a young American architect and he wanted to see as many famous Gothic buildings as he could and get some exercise at the same time. He traveled eleven hundred miles on his bicycle. But when the summer was almost over he found there were certain buildings he very much wanted to see that he hadn't had time to reach, especially as they were all in different parts of Europe. So he sold his bicycle and took airplane trips to these places. He traveled farther by airplane in a few days than he had by bicycle in three months.

First he flew to Cologne in Germany. Cologne sounds like a perfume, but it is a big city famous for its huge Gothic cathedral. Cologne Cathedral is the largest Gothic church of northern Europe. The spires are five hundred feet high—as high as ten three-story houses.

Cologne Cathedral was begun in 1248 and it took a very long time to build. It wasn't finished till 1880, more than six hundred years later. But that was better than many cathedrals, which were not finished at all and never will be now.

Cologne Cathedral is so wide for its length that to many people it doesn't seem as beautiful as the French cathedrals. Its twin western towers with their tall spires are so big and bulky at the bottom that they make the rest of the building look smaller than it is. The proportions of one part of the building compared with another are not as fine as they might be. This means the building doesn't look just

right as a whole, although each part by itself may be correctly and splendidly made. Of course the young architect knew these faults, but he could forget the cathedral's imperfections as he gazed with awe at the thousands of carved stone figures, the pinnacles, towers, and flying buttresses that make this building one of the best known in the world. It is magnificent, huge, impressive.

From Cologne my friend flew to Antwerp, in Belgium. There he went to see the most impressive church in Belgium—Antwerp Cathedral. This cathedral has a place for two towers on its western front, but only one tower is there. The other one was never built. Where it might have been is just a little steeple.

The one big tower rises high in the air and becomes narrower at the top, like a spire. It has so much stone carving on it that it looks like lace-work made of stone. The tower is graceful, but the lacy look seems a little too fancy. Probably Antwerp Cathedral really looks better for having only one tower. Two towers might have made the building seem mostly towers, like Cologne Cathedral.

This is just one of the many beautiful towers in Belgium. Many of them are not on churches at all but stand by themselves. They are often called singing towers because the bells inside ring out beautiful music. Singing towers were often useful as well as beautiful. The peal of the bells called the people together, spread an alarm in time of danger, and rang out in triumph to announce good news. Belgium can be proud of her beautiful Gothic towers.

Besides the singing towers there are many other Gothic buildings in Belgium that aren't churches. Gothic architecture suits churches well because it seems to be trying to reach up to heaven. The most beautiful Gothic buildings are churches, but many of the other Belgian Gothic buildings are beautiful too. Naturally, these buildings would not be shaped like a cross. Some of them have towers and spires like churches and some have not. Some were built by the towns for town halls

where the public business was carried on. Some were built as club houses, or headquarters, for gilds. Each kind of trade or business had its own gild, or band of skilled workers. There were gilds of stonemasons, goldsmiths, ship captains, merchants, butchers, bakers, and



TOWN HALL, BRUSSELS

candlestick makers. Of course each gild wanted its own club house. Some of the Belgian gild houses show very beautiful Gothic architecture.

Many of the Gothic town halls and gild houses had steep roofs with rows of dormer windows. You know, a dormer window is the

kind that sticks out of a sloping roof. The Cloth Hall at Ypres was one of the most famous of the Belgian buildings of the Middle Ages. But my friend the architect got to Belgium too late to see it. It was burned down during the World War.

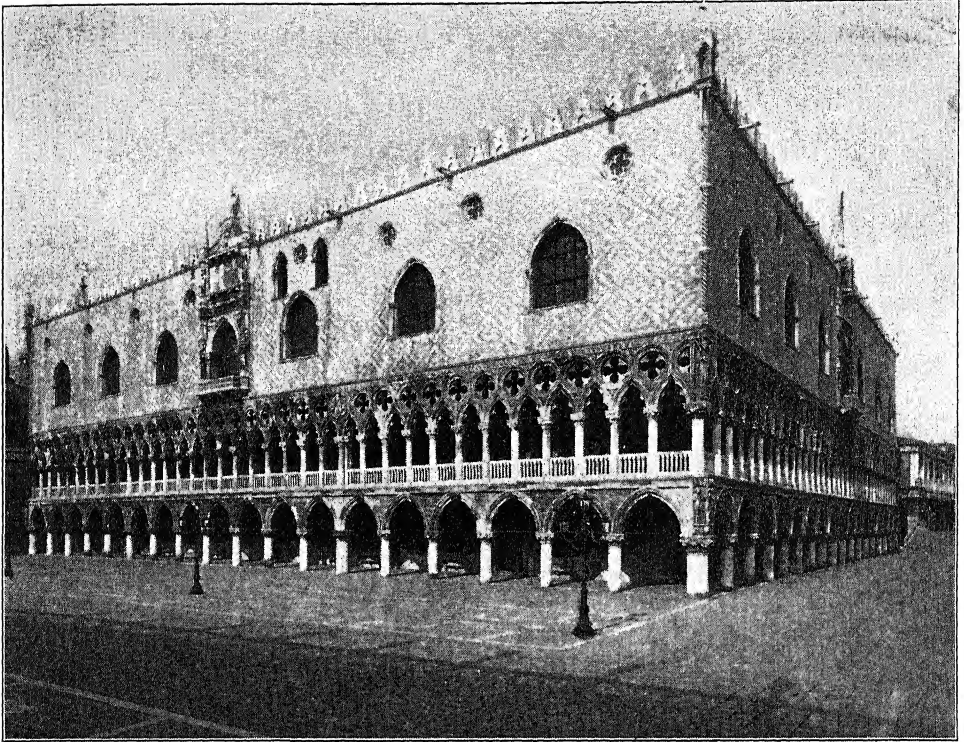
"From Belgium," the young architect told me, "I took a plane to Spain. I wanted to see the largest Gothic cathedral in the world. It is in the little Spanish town of Burgos. The twin towers with their tall spires reminded me a little of the towers of Cologne. There is a big eight-sided tower in the middle, besides the two spires at the end. Around the cathedral at Burgos are cloisters, chapels, and an archbishop's palace."

Burgos is in the northern part of Spain and is more like French and German cathedrals than the Spanish churches farther south. The Moors from Arabia had long ruled the south of Spain and the Gothic cathedrals there have many details that were suggested to the Spanish builders by the Moorish buildings. In another chapter I'll tell you about these Moorish buildings.

Now for a quick trip across the Pyrenees, across France, across the Alps to Italy. My friend knew what he wanted to see there—the Gothic buildings of Venice.

On the square of St. Mark stands the Cathedral of St. Mark with its five domes and Byzantine architecture. Next to St. Mark's on the square stands a long building four stories high. It is called the Doge's Palace. The Doge was the duke and ruler of Venice. The palace of the doges is Gothic (notice the pointed arches), but it is quite different from all other Gothic buildings. The two lower stories have long rows of the pointed arches on columns. Rows of arches like these, you remember, are called arcades. The arcades form covered porches around the Doge's Palace.

The upper hall of the Doge's Palace has flat walls of pink and white marble in a pattern. The flat upper half of the walls makes the fancier lower half look better, in just the way an old automobile makes a new



Courtesy of The University Prints

THE DOGE'S PALACE, VENICE

one look newer. If more of the Doge's Palace was like the upper part it would be too plain. As it is, the whole building makes a beautiful part of the beautiful square of St. Mark.

Other smaller palaces and houses in the Gothic style can be found in Venice. You have to take a boat to see them, for most of them are on streets that are made of water. A boat can take you right up to the water steps leading to the front door. That's what my architect friend did. He took a boat called a gondola and saw all he could see in the three days he had left before he had to sail for New York. On his trip home across the Atlantic he pasted in an album the photographs

he had taken and he was glad that airplane traveling had let him get the pictures of—

Cologne Cathedral
Antwerp Cathedral
A singing tower of Belgium
A Gothic gild hall
The cathedral at Burgos
The Doge's Palace
Some small Venetian palaces
And . . . a gondola.

CHAPTER 18

OPEN SESAME

ALI BABA came to the cave of the forty thieves. The door in the rock was shut. "Open sesame," said Ali Baba, and the door swung open.

Ali Baba was a Mohammedan. So was Sinbad the Sailor, so were Prince Agib and all the rest of those fascinating people in the "Arabian Nights."

"Open sesame." Let's see if the magic words will open the door of this chapter to show the treasures of Mohammedan architecture.

The Mohammedans believe in a book called the Koran which is for them what the Bible is for Christians. Now, the Koran forbade any Mohammedan to make a picture or a likeness of any living thing. So you can easily guess that a Mohammedan temple, or mosque as it is called, must be very different from a Gothic cathedral which is covered with hundreds of statues of men and animals and plants.

Another difference you would probably notice at once if you were in Istanbul or any other Mohammedan city would be the number of domes. These domes are generally not round but oblong like half an egg or an onion and they often have points on the tops like the end of a fat turnip or beet. But all the mosques do not have domes, for a Mohammedan dome used to be the sign of a tomb and only where the building served as a tomb for some one, a dome was built.

When you get close to a Mohammedan building you notice that the builders must have been good carvers of stone and marble, even if their religion didn't allow them to carve statues of living things. Their

carving is a pattern of straight lines and curves, squares and circles, diamond shapes and star shapes, zigzags, and crisscrosses. Some of the carving is so fine it forms a network that looks like stone lace.

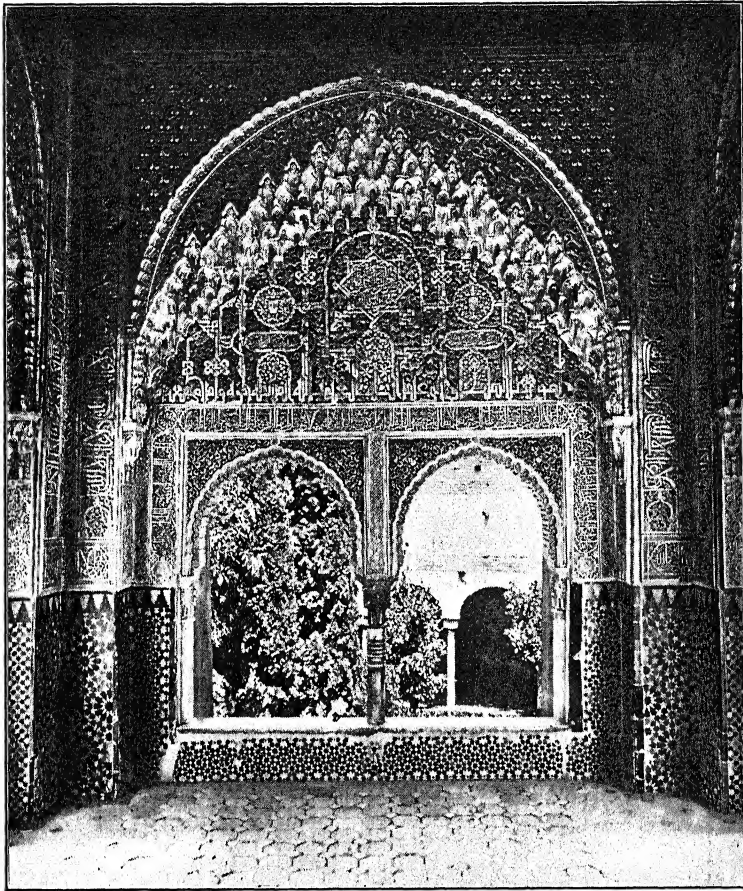
Inside the buildings the carving and decorations become even richer than outside. The designs are called arabesques because the first Mohammedans were Arabs and the Arabs built many mosques decorated in this way. Sometimes the arabesques are writings from the Koran. The Arabian letters are graceful and make beautiful decorations.

And inside these Mohammedan buildings we are apt to find still another form of decoration that other buildings do not have. The vaults under the domes (the ceilings of the rooms) often have a curious carved work that looks like hundreds of little stone icicles hanging down from the roof.

In every Mohammedan village is at least one minaret or tower for the *muezzin*, a man who climbs up five times a day to call the people to prayer. Some of the mosques have a minaret at each corner.

"Come to prayer, come to prayer. There is no god but Allah and Mohammed is his prophet," sings the *muezzin*, and then all good Mohammedans face toward the sacred city of Mecca and kneel in prayer. Mecca is the sacred city because Mohammed himself was born and lived there. Each Mohammedan mosque has a niche or hollow in the wall nearest Mecca. This niche takes the place of the altar in a church or temple.

The early Mohammedans did not believe in simply asking other people to become Mohammedans. They brought people into their religion by saying to them, "Be a Mohammedan or we'll kill you." So the Mohammedan religion spread quickly from Arabia where it started, for the Arabs were great conquerors. Eastward it spread, farther and farther, through Persia and across India. Bagdad became the capital city of these eastern Mohammedans. Westward the Arabs pushed across Egypt, across northern Africa till they came to the Strait of Gibraltar. This did not stop them. They built boats and sailed



ARABESQUES IN THE ALHAMBRA, GRANADA

across to Spain. Through Spain they spread until they got as far as France. All Europe would probably have become Mohammedan if the French had not stopped the Arabs in a battle fought at the town of Tours, in France.

But much of Spain did become Mohammedan. The Arabs in Spain were called Moors. The Moors set up a capital at Cordova for all the

Western Mohammedans, just as Bagdad was the Eastern capital, just as the Roman Empire had once had an Eastern and Western capital—Rome and Constantinople. For over seven hundred years the Moors ruled in Spain until they were finally driven out about the time of Columbus.

In Cordova the Moors built a huge mosque which is still standing there. You remember how the Mohammedans turned the Christian church of St. Sophia in Constantinople into a mosque. Well, in Cordova just the opposite happened. For when the Moors were finally driven out of Spain the Christians turned the Mohammedan mosque into a church. And a church it still is.

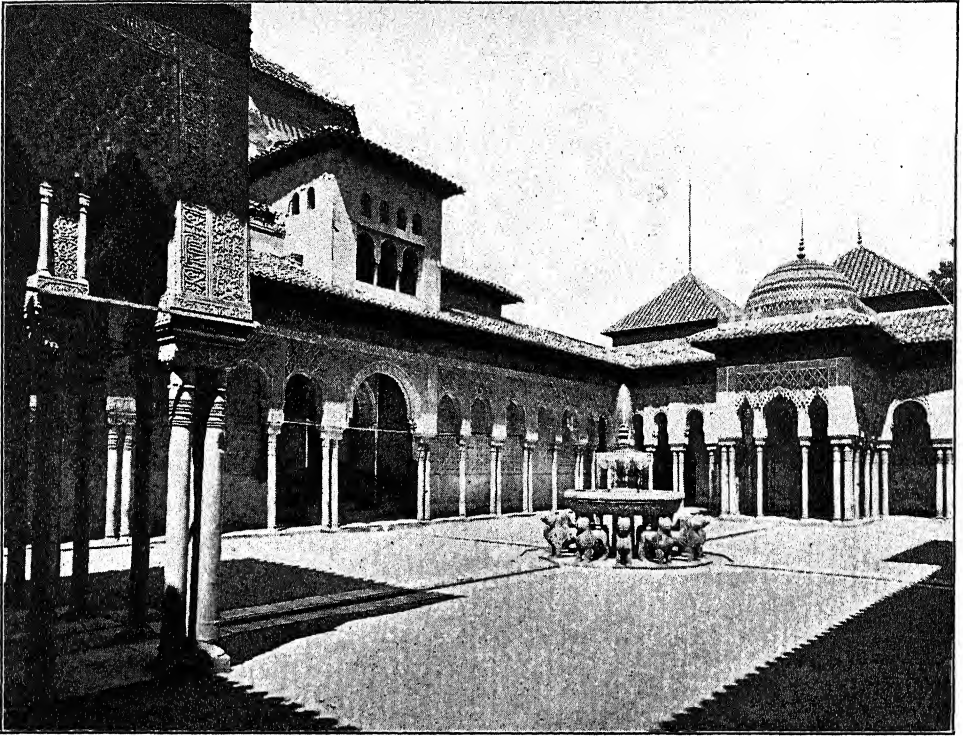
But by far the most famous Mohammedan building in Spain is the Alhambra. The Alhambra was built by the Moorish kings of Granada in Spain as a kind of fortress palace. The Alhambra is on a tall hill of rock with steep cliffs that helped keep back enemies. Inside the different buildings were guard rooms and halls, gardens and courts, all decorated with thousands of arabesques. The Court of Lions is one part of the Alhambra that you may have heard of. It looks something like a cloister, for round its four sides are arcades. In the middle is a big marble basin, held on the backs of twelve lions, which is used as a fountain.

And now I'm sure you are going to ask an embarrassing question. It's embarrassing because I can't answer it.

"How could the Moors have marble lions if they were not supposed to carve statues of living things?"

I don't know. Maybe the lions were an exception that proved the rule. Maybe the lions were carved by Christians and captured and brought to the Alhambra by the Moors. Maybe . . . But who knows? On page 367 is a picture of them. Do you see any arabesques?

Another noted building in Spain left by the Moors is called the Giralda (Hee-ra'l'da) Tower. Giralda meant weather-vane. The weather-vane is naturally on the very top of the tower. It is a figure

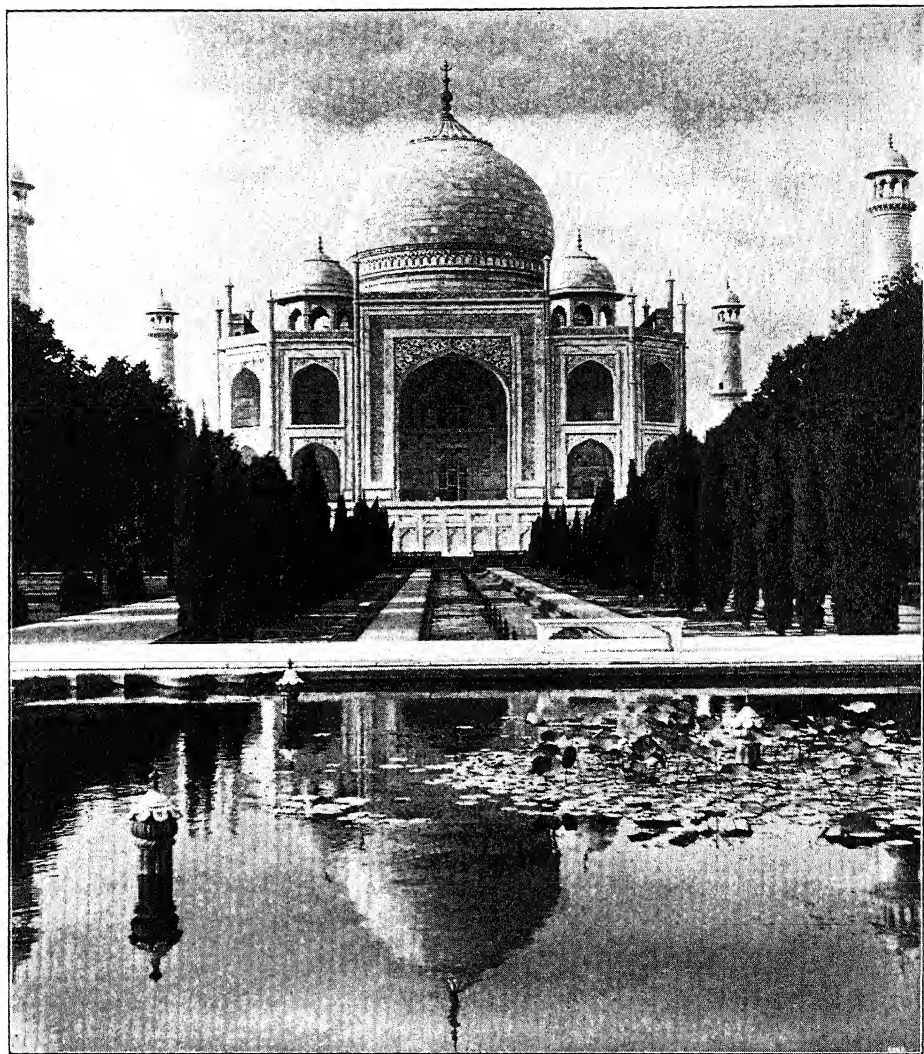


THE COURT OF LIONS IN THE ALHAMBRA

of Faith that swings with the wind. The top three stories of the tower are Christian Renaissance architecture, because when the Christians finally drove the Moors out of Spain they used the Mohammedan buildings for their own needs and often added to them.

Now I'm going to take you from Spain in the West to India in the East. In Agra, India, lived a Mohammedan ruler who erected a building in honor of his wife. You will be surprised to hear what kind of building it was. It was a tomb! And yet his wife was still alive when he built her tomb.

That seems strange to us, but it was the custom there. It was a



Photograph by Ewing Galloway

THE TAJ MAHAL, AGRA

sensible custom, at that, for the ruler and his wife used the tomb as a kind of pleasure house where visitors were received and parties were held. Then when the rulers died they were buried there.

This tomb is called the Taj Mahal. As it was a tomb, it was crowned with a dome. Many travelers who have seen it have called it the most beautiful building in the world. They have even placed it ahead of the Parthenon. The Taj Mahal is built all of marble and shines in the sun like a beautiful white jewel. Around the building are gardens, trees, lawns, and fountains and right in front of it is a long rectangular pool of water that reflects the trees and the Taj Mahal too.

And with the Taj Mahal we will end our story of Mohammedan buildings, saying as Ali Baba might say to close the chapter, "Shut sesame."

CHAPTER 19

DOME TROUBLE

ONCE upon a time a cathedral was being built in Florence, in Italy. The cathedral was almost finished except for a huge dome on top. Then one day the workmen had to stop work and leave the cathedral unfinished. The architect had died and, as he was the only person who knew how to build a dome big enough for this cathedral, the cathedral remained unfinished for a long time. The architect had left no drawings or plans to guide the builders. He had told no one how he thought the dome should be built. So for over a hundred years the cathedral at Florence stood there with a big hole in the crossing where the dome ought to have been. Finally it was decided to hold a competition and see if any one could be found who could build the dome and thus finish the cathedral.

In the competition many plans were suggested. One man said he was sure he could build the dome, but he would have to have a big column underneath the center to hold it up. Another man said he could build it, but he would have to have the help of a big pile of earth.

"If," said this one, "we mix gold coins with the earth and put this earth in a huge pile where the dome is to be, then we can build the dome around the pile. When the dome is completed, invite the people to carry off the earth to look for the coins. When all the earth is carried away, there will stand our dome."

It would have been like looking for the thimble and the ring in a birthday cake.

The man who won the competition and got the job was named

Brunelleschi (Brew-nel-less'kee). He had studied the old Roman buildings in Rome. He had worked as a sculptor, and he was a very good architect. Brunelleschi said he could build the dome, and build it, moreover, without the wooden centering that would use up such a lot of timber. But in spite of Brunelleschi's confidence, the men in charge didn't feel quite so sure he could do what he said he could. So they made the sculptor Ghiberti (Gee-bear'tee) an architect for the dome, too.

Now, Ghiberti was a fine sculptor (his Gates of Paradise prove that) but he really hadn't an idea of how to build the dome. He therefore did no work on it, although he was getting as much pay for the job as Brunelleschi, who did all the planning. Of course this didn't please Brunelleschi at all. So Brunelleschi made believe he was sick and stayed home in bed. Then the workmen had to stop work, for Ghiberti didn't know what to tell them to do next. So as long as Brunelleschi stayed in bed the work waited.

But in spite of this Ghiberti was not taken from the job, so Brunelleschi had to try another way of getting rid of him. He told the men in charge that he thought it best to divide the work between the two architects.

"There are two difficult things to be done," said Brunelleschi, "the bridges upon which the masons must stand and the chain which is to bind together the eight sides of the dome. Let Ghiberti take one of them, and I will take the other, that no more time be lost."

This did the trick. Ghiberti chose the chain, but couldn't make it work. He was soon taken off the job, and Brunelleschi could go ahead alone.

Brunelleschi finished the dome successfully. It is a different kind of dome from the dome of the Roman Pantheon, and it is different from the dome of St. Sophia. The dome is of brick and it has ribs of stone running down from the top. These ribs divide the dome into eight parts or sides, so it isn't smoothly round like most domes. For an-

other thing, this dome has a little cupola or tiny tower on top known as a lantern, although there is no light burning inside.

Just how Brunelleschi managed to build the dome without using centering is a mystery. But he did build it—and built it well. To-day



Courtesy of The University Prints

DUOMO AND BELL TOWER, FLORENCE

it still rises above the roofs of Florence to be seen from far and near, one of the great domes of the world. It gives to the cathedral its name, the Duomo. If you go to Florence you will see near the Duomo a statue of Brunelleschi. He is shown seated, looking up at the dome, with plans on his lap.

There is still another reason beside his work on the Duomo, for telling you about Brunelleschi. He was the first architect of a new kind of architecture known as Renaissance.

The Renaissance was a rebirth of interest in life—in writing, painting, sculpture, and architecture. It was especially a rebirth of interest in everything left by the ancient Greeks and Romans. I have told you that Brunelleschi studied the old Roman ruins. He had measured them, drawn pictures of them, and learned all he could about them. So when Brunelleschi designed buildings, he used the kinds of columns and decorations and vaults and plans that he admired from studying the Roman ruins. I don't mean he built copies of Roman buildings. He just used them to go by. And so did all the Italian architects after Brunelleschi.

The Italians didn't care for Gothic architecture much, anyway. There was too much sunlight in Italy for churches with walls of glass. The Italians liked their buildings dark and cool inside, instead of full of sunlight, even if the sunlight did come through the marvelous stained glass windows of a Gothic cathedral.

This new Renaissance architecture was good in many ways, but in some ways it was not so good. The Gothic buildings had always been built so that every part of the building had its own special job to do. The buttresses were to push against the walls. The decorations carved on top of the buttresses were to give them more weight so they could hold more solidly. The stained glass windows and the statues were to tell the Bible stories to people who couldn't read. There was scarcely any part of a Gothic building that was not honest or useful.

But the Renaissance buildings weren't always so honest. Often they were designed just to look well. Columns and pilasters were put on for decoration, without really helping to hold up anything as columns should. An ornament should look like an ornament, not like a column which should be a hard-working, load-bearing support.

Sometimes a Renaissance architect would cover a Gothic build-

ing with Renaissance ornament, to make it look like a Renaissance building.

But many of the Renaissance buildings *were* honest buildings. The best artists of the time became architects and designed buildings. New Gothic cathedrals ceased to be built. Indeed, there were almost enough churches already, and so most of the Renaissance buildings were palaces or government buildings or libraries.

CHAPTER 20

BACKWARD AND FORWARD

IN 1492 Columbus discovered America. Every one knows that date. And so it is easy to remember when Renaissance architecture began in Italy. It was in the same century as 1492, the fourteenth-hundreds. Some of the earliest Renaissance buildings of the fourteenth-hundreds are the best. On the next page is a picture of the Riccardi Palace in Florence. It looks more like a fort than a palace and that is what it really was on the outside—a fort.

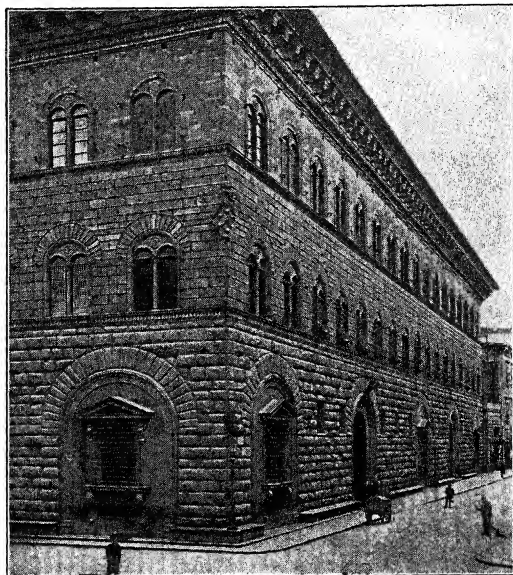
There was so much fighting going on that these palaces in Florence had to be built like forts. Notice the iron bars on the lower windows. Notice the heavy rough stones in the lower story. That kind of stonework is called “rusticated.” The stones bulge out from the joints between them. This makes the building look strong and solid.

The top of the building is crowned by a ledge that sticks out all around the wall. Such a ledge is called a cornice. The cornice kept the building from looking like a plain box. The cornice finished off the top of a building just the way a capital finished off the top of a column. The windows have round arches, not pointed like Gothic.

The building is more like a palace inside than outside. In the middle of the inside is an open courtyard which has balconies around it. There is a big banqueting hall, a library, and other finely furnished rooms. This Renaissance building is called the Riccardi Palace because Riccardi was the name of the family who bought it from the Medici family who built and lived in it first.

And now is a good time to notice a great big difference between

Gothic and Renaissance buildings. In Gothic buildings most of the lines are up and down. The eye is carried from the ground straight up to the top of the building. But in Renaissance buildings most of the lines are lengthwise—horizontal. In the Riccardi Palace your eye

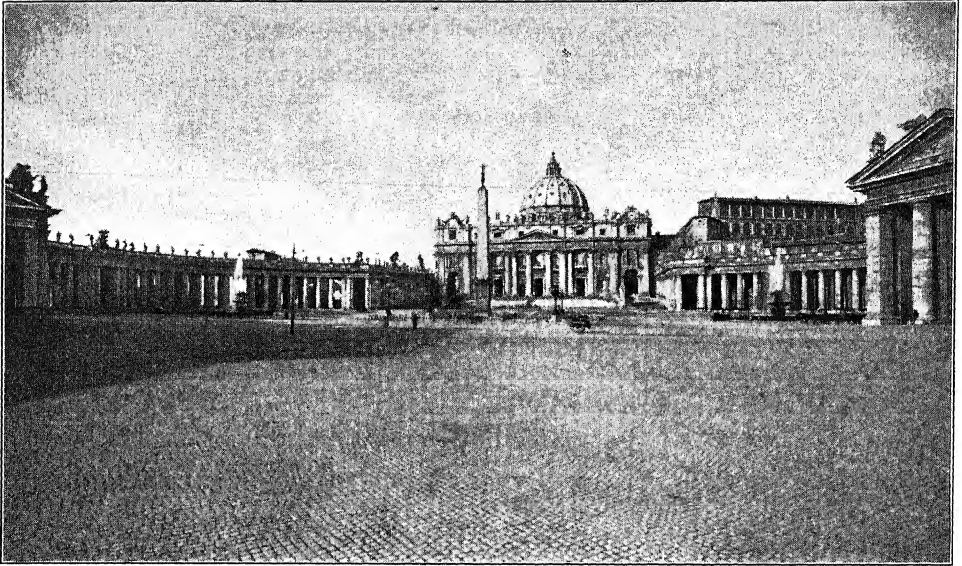


Courtesy of The University Prints

RICCARDI PALACE, FLORENCE

notices the horizontal lines of stones, the windows all in line, the horizontal ledges under the windows, and the long, straight cornice.

Several famous Renaissance architects followed Brunelleschi. One, named Bramante, made a plan for a great cathedral to be built in Rome for the Pope. It was to be the largest church in the world. And was to be called St. Peter's. But Bramante died before much work had been done. Several other architects worked on this big building, until



Courtesy of The University Prints

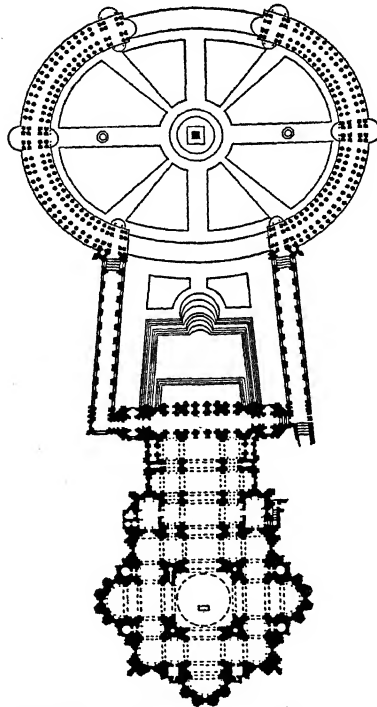
PLAZA OF ST. PETER'S, ROME

it was finally given into the care of the mighty Michelangelo, who was the greatest Renaissance sculptor as well as a great painter, poet, and wonderful architect. Michelangelo was an old man, but he pushed the work forward on St. Peter's so that it was almost finished at his death. Michelangelo's plan was to have the church built in the form of a Greek cross, with a magnificent dome over the middle.

Michelangelo made everything about St. Peter's so tremendously large that the cathedral doesn't look as large as it really is. That sounds funny, I know. You'd think the bigger a thing was, the bigger it would look. That isn't always so. It depends on something called *scale*. If you take a photograph of a tree, you can't tell from the photograph how big the tree is unless there is a man or a dog or a house or *something* near the tree to give you some way of measuring. (It is the

same with a map: you can't tell whether a town is thirty miles away or three hundred miles unless there is a scale to measure by.)

The windows of St. Peter's are about four times as tall as a man. So unless you see a man near them you would naturally think they were about four times as small as they are, because most windows are



Courtesy of The University Prints
PLAN OF ST. PETER'S, ROME

about as tall as one man. That is the great trouble with St. Peter's. It lacks scale.

Long after Michelangelo had died, another architect added a new front to the cathedral, and this cut off the front view of Michelangelo's wonderful dome. This architect also made the church a Latin cross

by extending the front. Then still later another man named Bernini added two colonnades, or rows of columns, to the front. These rows of columns are built around two sides of a great circular open space out in front of the cathedral.

The colonnades by Bernini are beautiful, but they haven't anything to help us judge their size by, any more than the cathedral has. They lack scale, just as the cathedral itself lacks scale. Look very closely at the picture and you will see some people in the square. When you measure the cathedral by them, you get some idea of how big it really is.

Look at the plan of St. Peter's, showing the cathedral itself and, at the top of the plan, the arrangement of the Bernini colonnades.

Gothic columns were never very much like Roman columns. But the Renaissance architects used the Roman capitals on the columns of their buildings. Sometimes they even pulled down Roman buildings and used the columns for new Renaissance buildings. Notice, too, the columns, which are like Roman columns.

There were many famous Renaissance architects in Italy and they have left many famous buildings, but we'll have to skip over some of them to tell you about a man named Palladio. Palladio made famous a special use of columns. The columns run from the ground up past two or three stories. This is called the Palladian style, because Palladio wrote a book about it which architects in other countries as well as in Italy found very useful. The front of St. Peter's shows columns running past two stories.

Renaissance architecture spread from Italy to other countries and has been used ever since. All styles of architecture grow out of earlier styles. The Renaissance architecture grew by looking backward toward Rome, but its use came at a time when the world was looking forward to greater things. Explorers, scientists, thinkers were showing the way to modern times, though they were getting some of their ideas from studying ancient ways. They were looking backward but moving forward.

CHAPTER 21

THE HOMES OF ENGLAND

HAVE you ever been locked up? I knew a boy who was locked up by mistake. He hadn't done anything bad, and he wasn't locked up in jail.

What the boy had done was to go to a big museum to see the paintings. He walked and walked through gallery after gallery, until his feet hurt and he felt very weary. When he saw a comfortable sofa in one of the rooms he sat down to rest. The sofa was so comfortable that the boy fell fast asleep.

When he woke up, everything was dark. Of course, he was a little frightened. Who wouldn't be! Great stone statues of Egyptian kings loomed black all around him. He hurried to the door. The door was locked!

He called and yelled and pounded on the door, but the museum had been closed for the night and no one heard him. There was nothing for the poor boy to do but stay there all night. When the doors were unlocked the next morning, you can imagine how surprised the guards were to find a very scared and very hungry boy waiting to get out.

A museum isn't a comfortable place to live in, even for one night. The boy who got locked up found that out. And almost all the buildings you have read about in this book would make very poor homes. Who would want to live in the Parthenon, or St. Sophia, or the Leaning Tower of Pisa, or Rheims Cathedral? Even the castles and palaces of the Renaissance would be inconvenient for homes without a great number of servants to keep them in order.

Yet from the very earliest times people have had houses to live in. Why haven't these houses been more important in the story of architecture?

One reason is that the houses people live in are not generally built to last as long as a great temple or cathedral. The houses were often built of wood which gradually decayed. Houses wear out just as shoes or ships or shirts do. Old houses are torn down to make room for new ones. Many burn down. So a dwelling as old as a Greek temple would be very hard to find.

Houses that people live in, however, are often more truly interesting than the great celebrated buildings. For instance, I like the everyday houses of England more than I like the big, handsome, famous public buildings built since the English Gothic cathedrals. I believe you may like them more, too. I'll tell you about them.

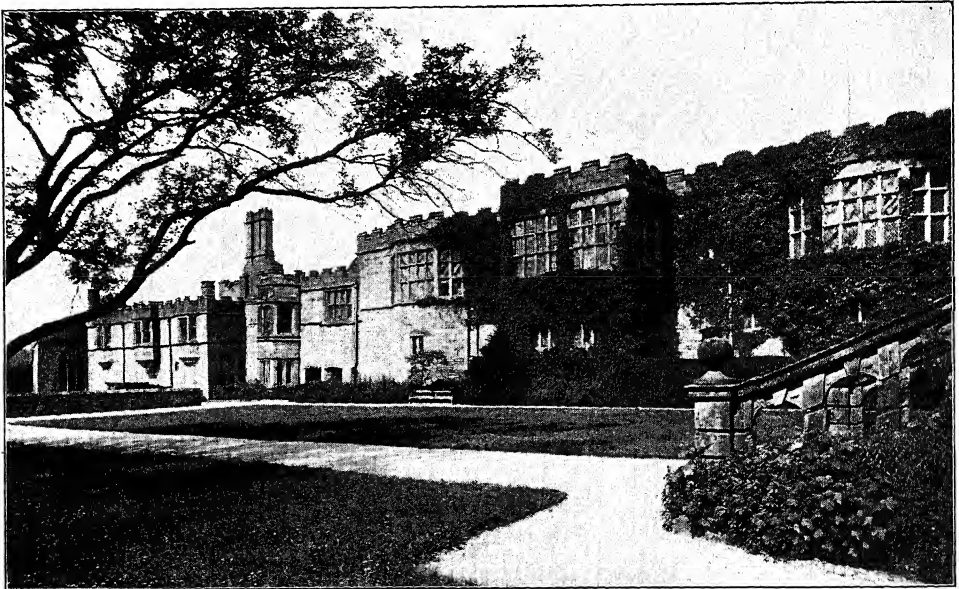
Gothic architecture in England had been slowly changing, until the later Gothic buildings were quite different from the early Gothic buildings. By the time Queen Elizabeth began to rule, English Gothic architecture had changed so much that it could hardly be called Gothic any more, so it was given a special name. The English rulers at this time belonged to the Tudor family and the architecture was called Tudor. Tudor architecture was in between Gothic and Renaissance architecture. It came after the true Gothic had died out and before the true Renaissance architecture had come to England. Tudor architecture is the most *English* of all English architecture.

Manor houses took the place of the medieval castles. Several of the old manor houses of this Tudor period are still standing. They have big bay windows that stick out from the walls, sometimes three stories high. The Tudor windows often had flat tops instead of pointed arch tops like the Gothic, but most of them still had stone tracery in them like the Gothic.

The windows were not arranged in even rows like the windows of the Riccardi Palace in Italy. Wherever a room needed a window, there

a window would be put. The chimneys too were put wherever a fire-place was needed, and not just so they would look well from the outside. Often the chimneys were round like columns, instead of being square, and some were twisted like corkscrews.

The Tudor houses were honest architecture. They were built for comfortable and useful homes, not for show with all the beauty on the outside. That is one thing that makes them so pleasant and home-like to look at. They were built of whatever materials could be found in the neighborhood, sometimes stone, sometimes brick, sometimes partly wood and plaster. They seem to fit into the landscape as if they had grown there.



Courtesy of Pratt Institute

HADDON HALL, A TUDOR HOUSE

Now here's a paragraph you'll probably have to read twice because there are so many insides and outsides to it. As the Tudor houses were built for homes, the inside was considered more important than the outside. The outside was not put on like Italian Renaissance outsides, to make a pretty picture. The outside was really just the outside of the inside. But the Renaissance buildings were built for the outside effect. The Renaissance inside was just the inside of the outside. That is really a big difference when you think of it. Does all that mix you up? Then read it once more and probably you can get straightened out.

Indoors on the first floor of a Tudor manor house was the great hall. On the second floor there was often a long gallery or hall running the length of the building. This long gallery connected the rooms of the second story and was, besides, often used as a place to hang the family portraits.

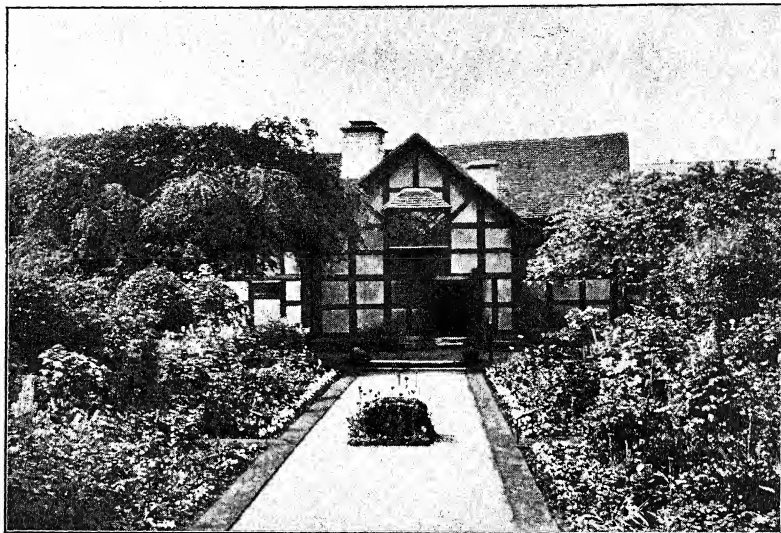
Besides the manor houses, there are many smaller houses of this period still left in England. These often have the first story built of brick and stone and the higher stories of oak timbers as a framework with the spaces between the timbers filled in with brick and plaster. The dark timbers against the white plaster make a very striking effect. One little girl always calls them zebra houses on account of the stripes, but their proper name is half-timbered houses.

Many of the jolly-looking little old inns and taverns of England are in half-timbered style. Here the stage coaches used to stop and travelers would find the inns cozy and warm after a long day's journey. Some of these old inns have queer names like the Fighting Cocks, or the Fox and the Hounds, the Six Bells, the Dolphin, the Feathers, or the Eagle and Child.

Two small half-timbered houses have become so famous that you must have seen pictures of them. They are famous as homes. One was the home of the Shakspeare family and in it William Shakspeare was born. The other was the home of Anne Hathaway, the woman whom

Shakspere married. Here is a picture of the birthplace of Shakspere in Stratford-on-Avon.

Honest, picturesque, comfortable—don't you like these homes of England?



Photograph by Ewing Galloway

SHAKSPERE HOUSE, STRATFORD-ON-AVON

CHAPTER 22

TRADE-MARKS

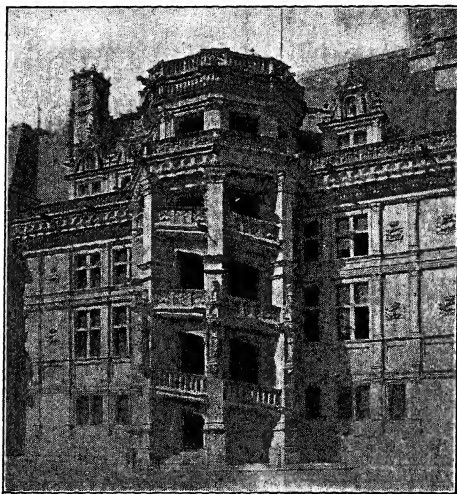
YOU have heard of a fireproof building. But have you ever heard of a fireproof animal? A little animal that looks like a lizard and is called a salamander was always supposed to be fireproof. The people of the sixteenth century used to think that if they put a salamander in the fire the salamander wouldn't mind it a bit. The hotter the fire, the more he'd like it. They used to call asbestos cloth (which is fireproof) salamander's skin.

In those days of the sixteenth century there reigned in France a king named Francis I whose badge was a salamander. Francis I also used a capital letter *F* as a badge. The salamander and the letter *F* were like trade-marks and Francis I had them put on all the many buildings he built during his reign. He was a powerful monarch with plenty of money to spend and his delight was to spend the money on the works of the best painters, goldsmiths, sculptors, and architects. Many of the painters, sculptors, and goldsmiths were Italians who came to work for Francis I. The architects were mostly Frenchmen.

The buildings of these French Renaissance architects were different from the Italian Renaissance buildings. Most of the French Renaissance buildings were still Gothic in shape. The lines still ran vertically up from the ground as they did in the Gothic style. You remember the horizontal lines of some of the Italian Renaissance buildings. This difference was because the Renaissance in France changed from Gothic little by little, while in Italy the Renaissance was not a slow change, but a sudden break from the Gothic.

In Italy many of the Renaissance buildings were churches. In France there were already plenty of fine Gothic churches. Most of the French Renaissance buildings, therefore, were palaces and castles. Chateaux is what the French call them, and we too use the French word when speaking of the French Renaissance.

So many of these chateaux were built along the river Loire in France that the valley of this river is known as the Chateau Country.



Courtesy of The University Prints

WING OF FRANCIS I, CHATEAU
OF BLOIS, FRANCE

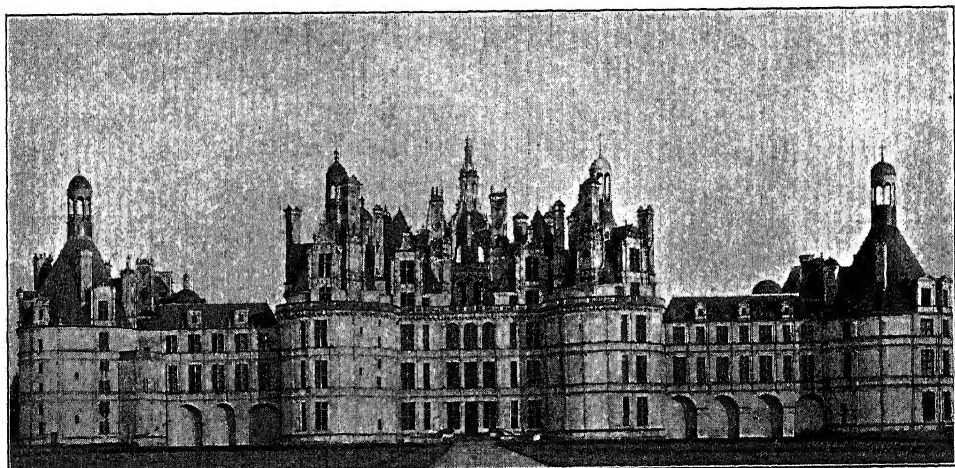
A very famous chateau still stands at Blois in the Chateau Country. Parts of the Chateau of Blois were built in the Gothic style before the Renaissance reached France, but one whole section was built by Francis I in the Renaissance style. This section is called the Wing of Francis I. There is a celebrated spiral staircase attached to the out-

side wall of the building in an open tower—something like a fire-escape. The staircase tower is stone and marble, like the rest of the building. On the staircase are carved again and again the salamander and the letter *F* of Francis I. The salamanders are royal salamanders and each has a crown above him. Little flames of fire seem to be flying all around the salamanders. These “trade-marks” of Francis I are on other parts of the building, as you can see in the picture.

Notice that the building is still Gothic enough to have Gothic gargoyles sticking out from the staircase and the roof.

If you should walk down the staircase at the Chateau of Blois and some one else started to walk up at the same time, you two would meet on the stairs. But there is another staircase in France where persons going down never meet persons going up at the same time. It sounds mysterious, but it really happens just that way. The pass-without-meeting staircase is in the central tower of a large chateau at Chambord.

No girl or boy who likes to read of knights and ladies in the days



Courtesy of The University Prints

CHATEAU OF CHAMBORD, FRANCE

of chivalry could help getting a thrill at seeing the Chateau of Chambord. It is a huge castle, partly fortified and once protected by a moat or ditch of water. It has towers, steep roofs, tall chimneys, and thick stone walls. With its towers and chimneys pointing toward the sky, it really looks more Gothic than Renaissance.

The pass-without-meeting staircase is in the tallest tower and works the way it does because there are two sets of steps which corkscrew up the tower together, one set above the other. The Statue of Liberty in New York has an iron staircase inside it built the same way as the stone staircase at Chambord.

Francis I liked to stay at Chambord when he wanted a change from city life. He liked to stay at Blois, too. But he liked best of all the palace of Fontainebleau, which is noted for its beautiful gardens, terraces, and lakes, and for its rich interiors. The outsides of the palace buildings aren't as interesting as Chambord and Blois, so we'll hurry on to still another palace of Francis I. This is the Louvre in Paris.

"But I thought the Louvre was an art gallery!" you say. So it is now, the biggest art gallery in the world, but it wasn't built as an art gallery. It was built by kings of France for their use as a palace.

The Louvre is so big—one gallery in it is a quarter of a mile long—that it would take you hours and hours just to walk all through it. Of course it wasn't built all at one time. Francis I built part of it. Then other kings added other parts. It wasn't finished till late in the nineteenth century. So the Louvre is a good building to study for a complete history of Renaissance architecture in France, from the earliest to the latest styles.

The Louvre is so big that a photograph doesn't do it justice. In a photograph you can only see one part of it at a time and as each main part looks quite different from its other parts, you really have to be in Paris and see it for yourself to get a good view of it.

Two of the most important of the many architects of the Louvre were Pierre Lescot (Less-koh) and Claude Perrault (Pair-oh).

Lescot was the architect for Francis I. Perrault's work is a century later than Lescot's. Perrault did the famous east façade with its long row of coupled Corinthian columns. The strange fact is that Perrault was the king's doctor, not an architect at all, but he managed to make a very good job of the east façade of the Louvre.

The Louvre was used as the kings' palace till the French Revolution. Then the king was beheaded and the Louvre was made into a national art gallery. An art gallery is what it has been ever since.

But though Francis I was showy and spent too much money in building, there was a later French king who was even more showy and spent even more money in building even more magnificent palaces. This king was Louis XIV, whose architect built the tremendous palace of Versailles. The palace at Versailles was added to by later kings until France became a republic. It is now owned and cared for by the French Government. Its beautifully laid out grounds add to the magnificence of the palace, but the buildings themselves are monotonous, too much alike, too long and regular. The most famous part is the Hall of Mirrors, a gigantic room with mirrors along the walls. The Hall of Mirrors is where the peace treaty was signed after the World War.

At Versailles, not very far from the big palace, is a much smaller building called the Petit Trianon. It was built by Louis XV and became the favorite residence of Marie Antoinette, the queen who was later beheaded in the French Revolution.

The French Revolution brings us almost up to the nineteenth century. In the nineteenth century the French erected several buildings that have become famous. One of these is the Dome of the Invalides, a building sacred to Frenchmen because it contains the tomb of Napoleon. In it you can see Napoleon's badge or trade-mark—a capital letter N.

The French Panthéon has a somewhat similar dome, with however, a circle of slim columns around the base. The Panthéon is used as a

church and is a shrine to the memory of Saint Genevieve, the patron saint of Paris. It contains the celebrated mural paintings of scenes from the life of Saint Genevieve.

France, and especially Paris, has many other handsome buildings. I wish I could tell you about them all. But I'm sure there are enough French names in this chapter already to keep your memory busy. If you can't name them all without looking back, you'll know why I'm not going even to mention the Madeleine, the Arc de Triomphe, L'Orangerie, the Eiffel Tower or the Opéra.

What! I've already mentioned them? So I have. Well, anyway, I won't say anything more about them. So there!



DOME OF THE INVALIDES, PARIS

CHAPTER 23

BREAKING RULES

HAVE you ever gotten tired of being good? Have you ever felt like throwing an ink-well through the window at school or standing on your head when the teacher asked you a question in arithmetic? Have you ever wanted to whistle out loud in church just because everything was so quiet and solemn and you knew you shouldn't?

The trouble with doing any of these things is that afterward you generally wish you hadn't. It's not much fun being punished. I found that out, myself, almost every time I tried not being good.

The architects of Italy, after about two hundred years of Renaissance buildings, were like that. They seemed to be tired of being good and obeying all the rules for beautiful Renaissance buildings. The rules "cramped their style." In the strict Renaissance architecture almost every part of the building had to be based on some idea from the ancient Romans. The new kind of architecture grew out of the Renaissance architecture, but it tried to break the rules. It was called Baroque architecture. I can't tell you for sure how the word "Baroque" started, but people say it came from a Portuguese word for a badly shaped pearl.

Baroque architecture has been punished, not by getting a spanking but by being held up as a bad example ever since. It has really been punished too much, for some Baroque buildings are very fine and very beautiful. The worst Baroque buildings are terrible. They broke too many rules, like a bully in school. But the best Baroque buildings are

not bad at all. They broke just enough rules to be interesting—just as a boy who is sometimes bad is more interesting than a goody-goody.

Buildings in the Baroque style are generally very well planned. They fit the place where they are built. They seem to go well with the scenery around them. The trouble with them is that they look too proud, too crowded with decoration, as if they were trying to show off. They are covered, inside and out, with queer columns and statues and scrolls and twists and fancy marble slabs. They make you think of a very, very fancy birthday cake with icing frills and curlicues all over it.

This Baroque architecture began in Italy. It became the chief architecture of the seventeenth century in that country. And in Italy stands one of the most beautiful of all Baroque buildings. It is a church built beside the Grand Canal in Venice. This church was built for a very special reason. That frightful disease called the plague had killed about a third of all the people in Venice. Sixty thousand people had died. Then the plague stopped. The people who were left alive were so thankful for being spared, that they built the beautiful Baroque church as a monument of thanksgiving. They named it (of course in Italian) the church of Saint Mary of Good Health. Everybody calls it by its Italian name, so you will have to try to learn Saint Mary of Good Health in Italian—Santa Maria della Salute. See if you can pronounce it like this: San'tah Ma-ree'ah del'lah Sah-lou'tay.

Santa Maria della Salute is in the form of a Greek cross. It has a big dome over the central part and a small dome over the chancel. The buttresses for the dome are shaped like rolls of ribbon.

Notice how crowded with statues and with these rolls the church seems to be. But also notice the beautiful flight of steps that leads down toward the canal. The church makes one of the most beautiful sights in Venice as you look at it across the water.

This fancy Baroque architecture spread all over Italy and into Spain and Portugal. In Spain a few of the Baroque churches are so crowded with decoration and seem to be showing off so much that you

might think they were designed by crazy people. Other Spanish Baroque buildings are quite beautiful, although they would be ugly in a country where the sunlight wasn't so bright. The brighter the light, the more decoration a building seems to be able to stand.



Photograph by Publishers Photo Service

SANTA MARIA DELLA SALUTE, VENICE

Now that we have reached Spain, we come to the people who used Baroque architecture all over the world. In the Roman Catholic Church a body of men like the monks of the Middle Ages was formed to spread the Catholic religion. The men who belonged to this body were called Jesuits. The Jesuits built churches wherever they went, and usually they built their churches in the Baroque style.

In this seventeenth century, the kingdom of Spain was very powerful. The Spaniards had gone exploring. They had taken, in the name of their king, most of South America and a great deal of North America, too. Wherever the Spanish explorers went, the Jesuits soon followed, preaching Christianity to the Indians, founding Indian schools, and building churches. Soon there were more Baroque churches in the Americas than in all of Spain.

These Jesuit churches were so well built that most of them are still standing in spite of earthquakes, revolutions, and neglect. You can imagine what a hard job the Jesuits had. First they had to learn the



Photograph by Ewing Galloway

CATHEDRAL IN MEXICO CITY

Indian language or teach the Indians Spanish. They had to show the Indians how to build the stone buildings, often in the hottest kind of hot countries. Yet before the buildings could be built, the land had to be cleared and the stones dug out of the quarries.

The picture shows you the great cathedral at Mexico City. It doesn't look much like the Santa Maria della Salute, does it? But it, too, is Baroque in style. You can see how much decoration there is on it.

Baroque architecture was used also in Germany. Some of it came to France, but very little was ever used in England. If you will remember the seventeenth century, Spain and Portugal and their colonies, and Italy and Germany, you will have in your mind the time and places where this queer, gay Baroque style was most used.

CHAPTER 24

THE ENGLISH RENAISSANCE

HAVE you a bicycle? Where I used to live, most boys had bicycles. We used to ride our bicycles out to a field where we could play baseball. One afternoon one of the boys was late getting there. But when he did come he broke up the baseball game. He had left his bicycle at home and was driving a goat hitched to a little cart. At once all of us other boys wanted a goat too, even though a goat wasn't nearly so good for getting anywhere in a hurry.

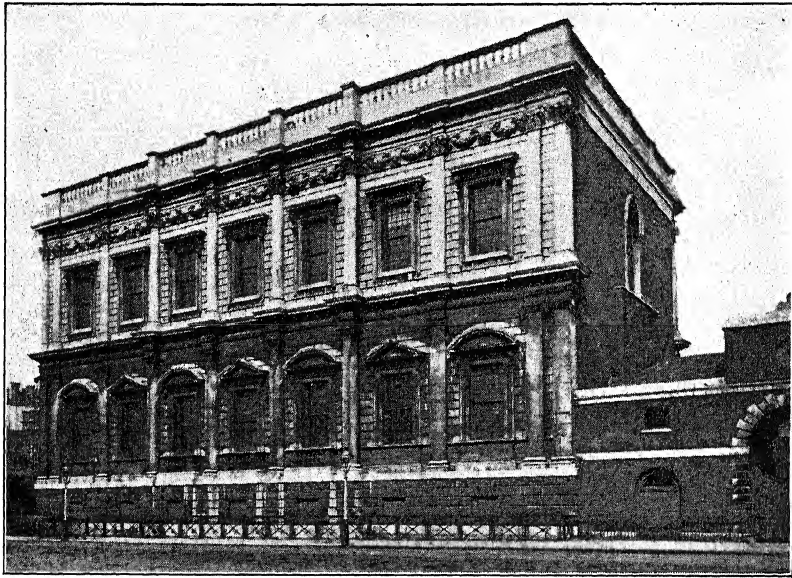
And that is just like what happened three hundred years ago in England. An architect named Inigo Jones went to study architecture in Italy. He saw the Italian Renaissance buildings there. He studied the old Roman buildings, and when he got back to England he began designing Renaissance buildings. They were new to Englishmen, just as the goat was new to us boys, and every one wanted a Renaissance building just as all of us wanted a goat.

Renaissance architecture was late in reaching England, just as the boy with the goat was late in reaching the ball game, but when it finally did get there, nothing else would do.

Soon a great palace for the king, called the Palace of Whitehall, was designed in the Renaissance style. But the only part of the design that was built was the banqueting hall. This was Inigo Jones's best-known piece of architecture. The Banqueting Hall of Whitehall became a famous building. It looks something like the Petit Trianon at Versailles. It was the first of many English buildings based on the Roman and Italian designs.

Do you remember that mixy paragraph about insides and outsides, in Chapter 21? Well, the Banqueting Hall is a good example of the outside not being the outside of the inside. The outside looks like a building with two stories, but there is only one story inside—just one big room with a balcony around the walls.

The Banqueting Hall is, however, a beautiful building both inside and out. Notice the Roman columns and the rusticated stone-work at



Courtesy of The University Prints

BANQUETING HALL OF WHITEHALL, LONDON

the street level, just like the Italian Renaissance buildings. The Banqueting Hall is still called by that name, although it was used as a chapel for many years and finally turned into a museum.

The next great architect in England after Inigo Jones wasn't an architect at all. At least, not at first. He was an astronomer and a college professor. He was Sir Christopher Wren.

Sir Christopher Wren became famous as an architect because of a fire. It was one of the biggest fires in the history of the world and happened in 1666. A building in London took fire. The fire spread to other buildings and could not be stopped. Soon a large part of London was burning down. "London Bridge is burning down" would have made a good song for 1666. Besides London Bridge and thousands of other buildings, over fifty churches were burned. The biggest of these was old St. Paul's Cathedral. Sir Christopher Wren was given the job of making new designs both for St. Paul's and for the other churches.

Sir Christopher thought Gothic was a poor kind of architecture. He liked the Renaissance style and so he built the new St. Paul's Cathedral as a Renaissance building.

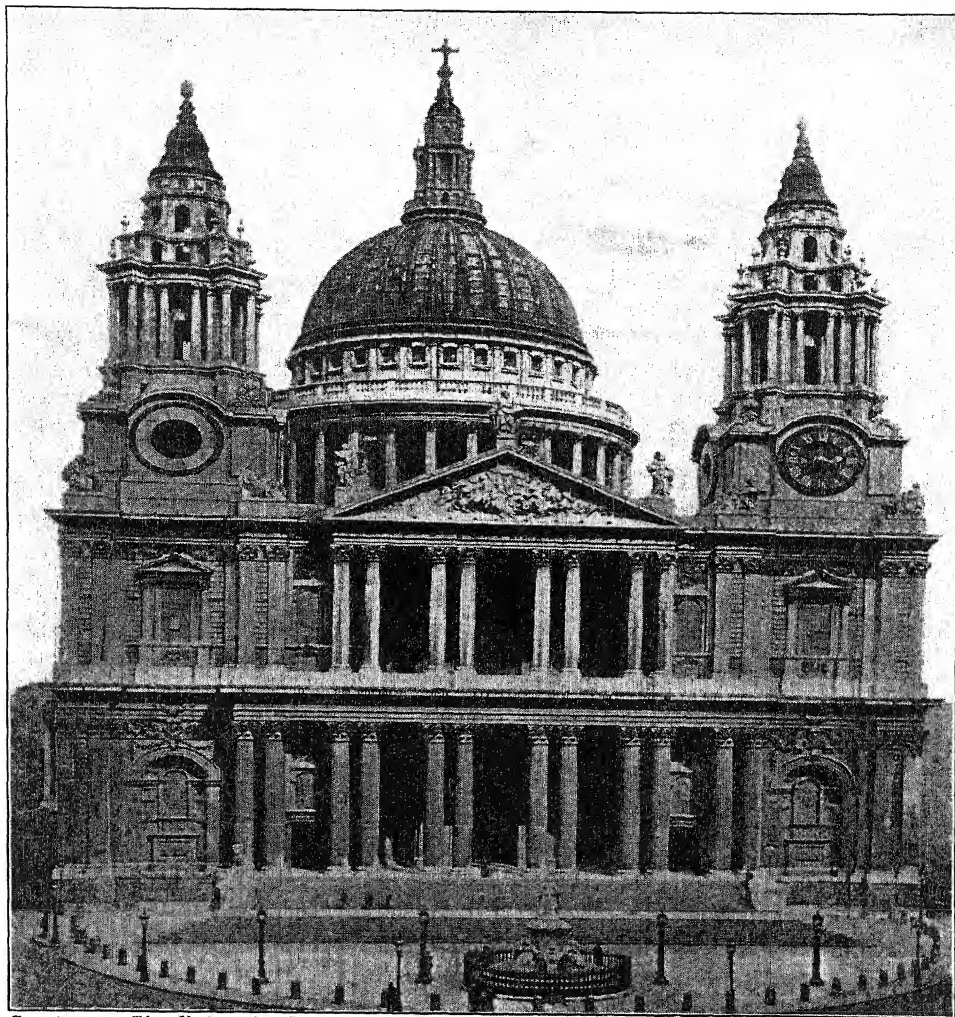
Like the Gothic cathedrals, St. Paul's is in the form of a cross. Over the crossing Sir Christopher erected a very large dome with a stone lantern on top. Really it is a three-in-one dome—an outside dome, an inside dome for a ceiling, and a brick dome between the other two. This brick dome between the other two was made to hold up the heavy stone lantern.

The outside of St. Paul's has two orders of columns, one above the other like the Banqueting Hall. This makes St. Paul's look better than St. Peter's in Rome, because the two orders give a better scale to judge the height by, than the one order of huge columns on St. Peter's.

Unfortunately, St. Paul's wasn't very carefully built. The walls were filled with poor materials and the building in time became unsafe. Several years ago it was closed while workmen strengthened the foundations and the supports. Now it is again open and strong enough not to collapse.

Sir Christopher Wren himself is buried in St. Paul's. On his tomb, in Latin, is carved, "If you would see my monument, look around you." St. Paul's is indeed his monument, the great landmark of London and the largest cathedral in England.

As for Sir Christopher Wren's other churches, no two, of the more



Courtesy of The University Prints

ST. PAUL'S, LONDON

than fifty, are alike. Some are noted for the outside design, many for their beautiful interiors, and many more for their graceful steeples. In fact Sir Christopher Wren is famous for his Renaissance steeples. People liked them so well that even in the American colonies churches were built with steeples that look like his designs.

Books were now published giving the rules and designs for Renaissance architecture and many buildings were put up from designs and descriptions in these books. Palladio's book on architecture was translated into English and was used by architects in both England and America.

Renaissance architecture was used after Sir Christopher Wren's death for many years in England. Under the kings George I, George II and George III the English Renaissance architecture had reached a style all its own. This is called the Georgian style. I'll tell you more about the Georgian style when we come to American architecture.

CHAPTER 25

FROM HUTS TO HOUSES

JUST suppose you had to go to a wild, unexplored land and live there the rest of your life. What kind of house would you build? Probably you would build a log cabin if you had an ax and could find plenty of trees. But if you had never heard of a log cabin, the chances are you would build some other kind of shelter that you had heard of—a cave perhaps.

The first English settlers who landed in America had never seen a log cabin. What they thought of first were the little huts of the charcoal burners that they had seen in the woods in England. These huts were made of branches and twigs woven together, somewhat as a wicker chair is woven. The early settlers built their shelters like the charcoal huts and put steep-pointed thatched roofs on them. Do you know what a thatched roof is? It's a roof made of straw. When these huts were finished, they must have looked very much like the wigwams of the Indians.

But what about log cabins? Surely the early settlers used them? Yes, they did use them as soon as the Swedes had settled in Delaware. The Swedes had lived in log cabins in Sweden and when they came to America where logs were easy to get, they built log cabins there also. Then the use of log cabins quickly spread. Log cabins were used by the pioneers and settlers as they pushed west away from the seacoast, for trees were plentiful.

At least one log cabin has become famous. It is the one Abraham Lincoln was born in. Now the whole cabin is kept in a big marble build-

ing built especially to hold it and protect it at Hodgenville, Kentucky.

Some of the early buildings that the settlers from England built were Gothic in style. At Jamestown in Virginia the settlers built a simple little brick Gothic church which has since fallen to pieces. But another little early church called St. Luke's is still standing. St. Luke's has the pointed windows and steep roof of the Gothic, and this seems strange because the Renaissance had reached England some years before America was settled by Englishmen and the Gothic style had gone out of style in England.

In New England as well as in Virginia some of the early houses were Gothic. They were built of wood and had windows opening at the side on hinges (the way a door opens), with many small panes of glass in each window—casement windows they are called. Generally the second story of these houses stuck out a foot or so beyond the first story so that there was an overhang in front. Several of these old Gothic houses are still standing.

After a while books about architecture began to find their way into the American colonies. These books came from England where Renaissance architecture was in full swing. The books had plans and diagrams or drawings in them which the American carpenters found very handy guides for making houses. King George was reigning in England, first King George I, then George II, then George III, and so the English Renaissance architecture was called Georgian architecture. And after the first few Gothic buildings our early American architecture was Georgian too. We call it now Georgian Colonial or sometimes just Colonial.

Most of the Georgian Colonial houses were made of wood in the North and of brick in the South, but in Pennsylvania stone was used. The houses weren't built by regular architects, but by the master carpenters who used the books sent from England to guide them. The houses were so suited to this country that architects to-day still often use this Georgian Colonial style for houses.

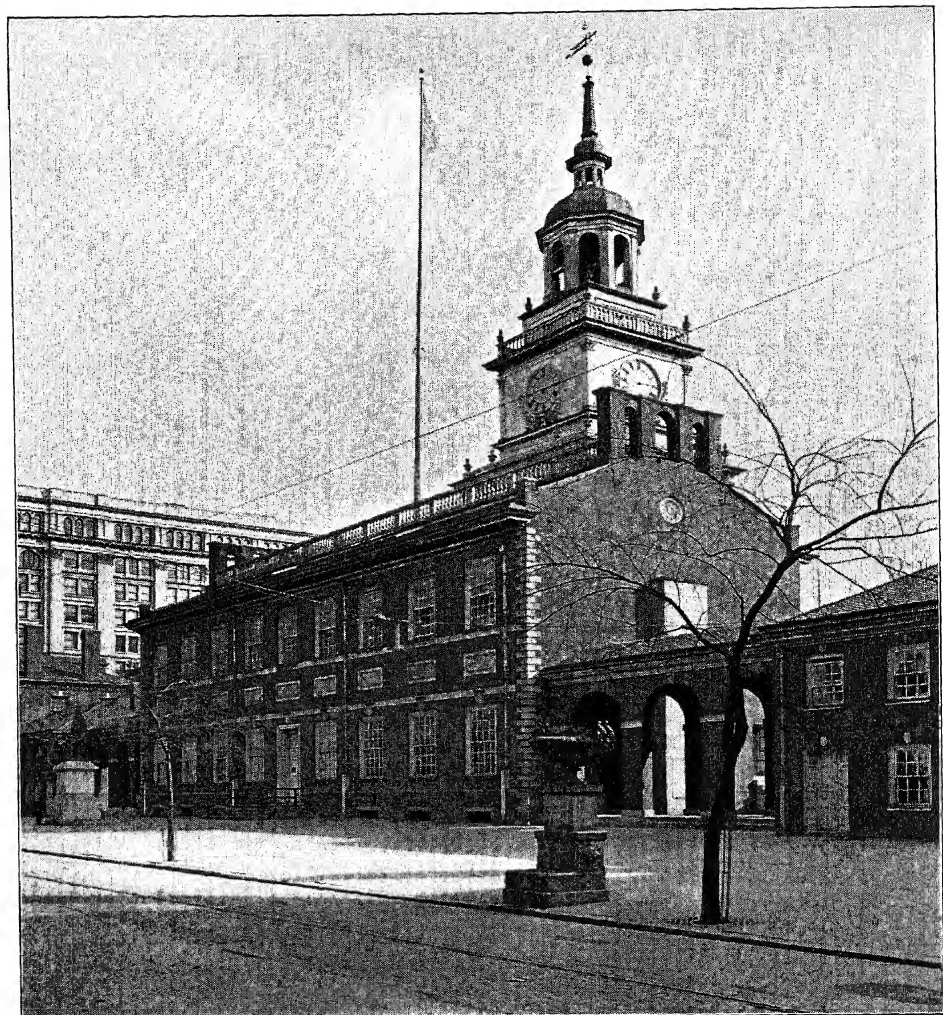
Besides Georgian Colonial there was Dutch Colonial much liked by the Dutch settlers in New York. The Dutch Colonial houses generally had a roof that sloped down beyond the front of the house to cover the porch. The Dutch Colonial style is also being used again in modern houses in America.

The Colonial houses were generally made plain and simple. They were never decorated much, like Baroque buildings, and that is one reason they seem so charming to us. Most of the decoration was carved in wood on the doorways, the mantel-pieces, the stairways, and the ceilings. Sometimes there were wooden pilasters or half columns or columns in the Roman style at each side of the door. Often there was a transom window over the front door. This would be decorated with carved wooden tracery sometimes in the shape of a fan, and called a fan-light.

Many of these old houses of colonial times are still standing. Most of them, of course, are in the Eastern States, which were settled first. Some are famous for other reasons than architecture—Mount Vernon, for instance, because it was the home of George Washington. Mount Vernon on the Potomac is visited every year by thousands of people who come to see where the Father of his Country lived.

Independence Hall in Philadelphia is famous as the building where the American Declaration of Independence was signed. That is how it got its name. It was designed by a lawyer. It is a fine example of Georgian Colonial architecture in brick. The tower reminds us of one of Sir Christopher Wren's steeples in London. In Independence Hall is the famous Liberty Bell which rang so hard that it cracked.

The man who wrote the Declaration of Independence was Thomas Jefferson, later President of the United States. You may be surprised to learn that Thomas Jefferson was one of the best architects of his time. Architecture was not his business but his hobby. He was a great believer in old Roman architecture and he designed many buildings that were Roman in style. One of these is Monticello, Jefferson's own



Courtesy of The University Prints

INDEPENDENCE HALL, PHILADELPHIA

home. He also made the design for the University of Virginia, with the buildings arranged around the sides of a big square lawn or campus. The white columns against the dark red brick of the buildings are very attractive.

Jefferson's work in architecture was mostly done after the Revolution. We can hardly call it Colonial, because the country was no longer part of Great Britain's colonies. A better name would be Early Republican.

Then came a time when almost all buildings were made with Greek details—Greek columns, Greek shapes. An architect named Robert Mills made a Greek façade of columns for the Treasury Building at Washington. Mills also made the first monument to George Washington—a huge Doric column with Washington's statue on top which stands in Baltimore. It was the same Robert Mills who designed the tallest building in the world at that time, the Washington Monument in Washington. The Washington Monument is a huge obelisk (do you remember the Egyptian obelisks like Cleopatra's Needle?), which was not finished for many years after it was begun.

But while the United States was being born in the East, what about the western side of America?

Well, in the Southwest and far West most buildings were Spanish. Mexico had been settled by people from Spain. The Jesuit priests built churches in Mexico, Texas, and New Mexico in the Baroque style. These buildings are called Spanish Colonial because they were built in Spanish colonies.

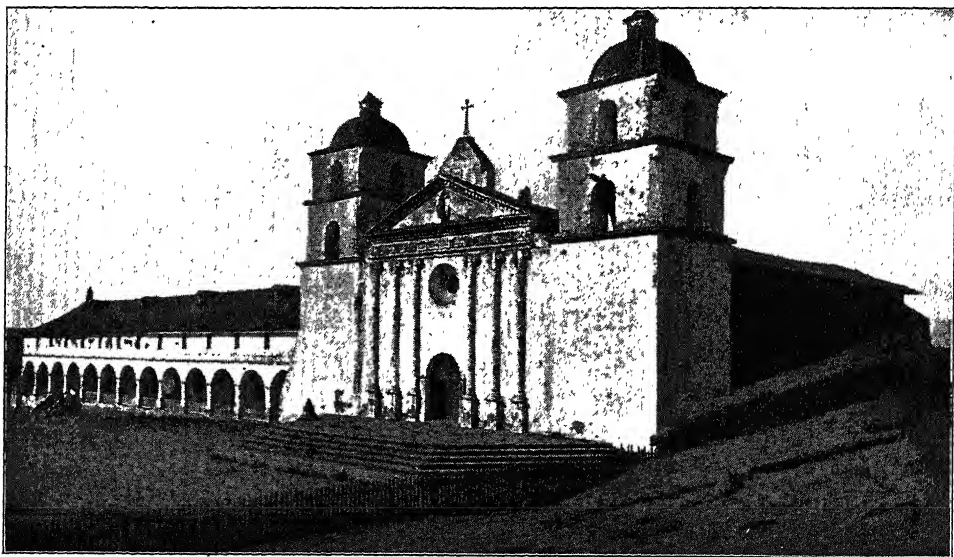
Now, about the time of the American Revolution some Spanish monks called Franciscans pushed into California from Mexico. In California the Franciscans built churches and other buildings. Their settlements were called missions. They were built along the coast, a day's journey apart, on a road called the King's Highway. A mission was very much like a monastery of the Middle Ages. But as the

Franciscans had no one to help them but Indians, they built the missions very plainly and solidly.

Each mission had a church connected by cloisters with other buildings around a courtyard. The buildings were made usually of sun-dried brick or adobe.

This Mission style has been used by present-day architects too, just as the Georgian and Dutch Colonial styles have been used. The Spanish Colonial seems suited to the warm climate of California and the Southwest better than any other kind of architecture. In California many of the old missions may still be seen, some in ruins, some carefully preserved.

Another kind of Spanish Colonial architecture grew out of the architecture of the Indians. Many boys and girls think of the Indians as having only wigwams of bark or skins. But the Indians of the Southwest—of Arizona and New Mexico—had houses built of adobe. They



Courtesy of The University Prints

MISSION, SANTA BARBARA, CALIFORNIA

were really apartment houses, because they had rooms for many families. They were called pueblos. Pueblos had flat roofs because there was so little rain. They were often several stories high and had ladders outside, instead of stairs inside, to get from one story to another.

The Spanish colonists who settled in New Mexico copied this pueblo style from the Indians. You can always tell houses in pueblo style because the flat roofs are on logs whose ends stick out from the top of the walls. The very old Governor's Palace in Santa Fe is built in this pueblo style, although it is only one story high.

New Orleans, settled by the French, introduced from France an architecture with long French windows and iron balconies.

So you see that America in its early days used many different kinds of architecture. I'll make a list of them for you so you can remember them better. If you want to test yourself see if you can name one fact about each kind. Here is the list:

- Log cabins
- Gothic Colonial
- Georgian Colonial
- Dutch Colonial
- Early Republican
- Spanish Mission
- Spanish Indian (pueblo)
- French Colonial

CHAPTER 26

AL AND OL

“**H**E LOST his head completely.” You’ve heard people say that about some one who got so excited he didn’t know what he was doing. But the people didn’t mean exactly what they said. No one could really lose his head without losing his life with it. Which is just another way of saying that every living person has a head.

Like a person, a country has a head—a chief ruler, a president, a king, a prime minister, a dictator. And where the chief ruler rules is generally the capital city. “Capital” comes from a word meaning head.

After the American Revolution the new republic of the United States had to have a capital. After trying out both New York and Philadelphia, it was decided to build an entirely new city as a new capital for the new nation.

A place on the Potomac River was chosen, a place of fields and forests. It was named Washington. Frenchmen had helped the Americans in the Revolution and now a Frenchman helped them with the new city. He was Major L’Enfant (Lahn-fanh), who drew a plan for Washington with wide avenues and streets and parks. With L’Enfant’s plan to go by, the new city was started. But Washington wasn’t much of a city at first—just a few houses in the woods, with “streets” of mud connecting them.

A capital city of course needs a capitol building. You would think both the city and the building would be spelt alike. But “al” means the city, “ol” the building. So a big competition was held to get the best

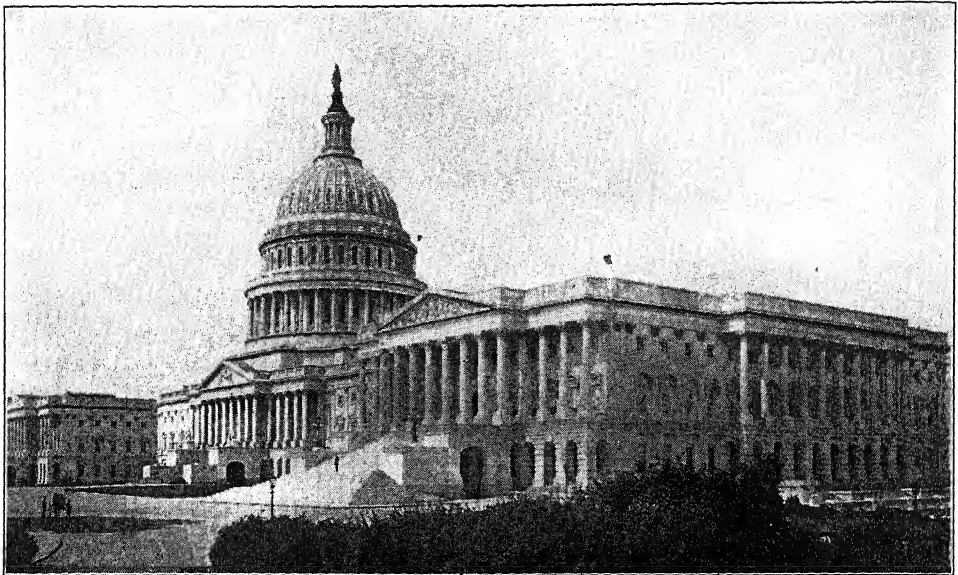
design for a capitol. Many good designs came in. The one chosen was by Dr. William Thornton. Both George Washington and Thomas Jefferson said they liked the Thornton design very much, and so the Capitol was begun.

If there was to be a capitol, there certainly ought to be a special house for the President. So a president's house was begun the same year as the Capitol. For the first twenty years or so the President's House was always called just that—the President's House. But suddenly the name changed and became the White House. Do you know why?

It was on account of a fire. Some soldiers burned both the new Capitol and the President's House. They were British soldiers who attacked Washington in the War of 1812. After the fire the President's House still had the walls standing, but the stones were blackened and scorched. The building was repaired and the walls painted white to hide the fire stains, and since then the President's House has been called the White House.

The Capitol luckily had not been finished when it was burned. It too was rebuilt after the fire, but it wasn't finished for years and years. At first this Capitol of ours had a low flat dome over the central part. Then this part was outgrown and an addition was built on each end of the old building. These new ends are called wings—the Senate wing at one end and the wing for the House of Representatives at the other. When the new wings were added a larger dome was designed for the center. During the Civil War President Lincoln kept work going on this dome even though workmen were scarce. He felt the dome stood for the Union of the States and that people on the Northern side would be encouraged by seeing this dome growing day by day.

The new dome is almost as big across as the dome of St. Peter's in Rome. It was made of a new building material—not wood or brick or stone, but iron. To keep iron from rusting, it must be kept painted. Try to think how many buckets of paint forty-three thousand pounds



Courtesy of The University Prints

THE CAPITOL, WASHINGTON

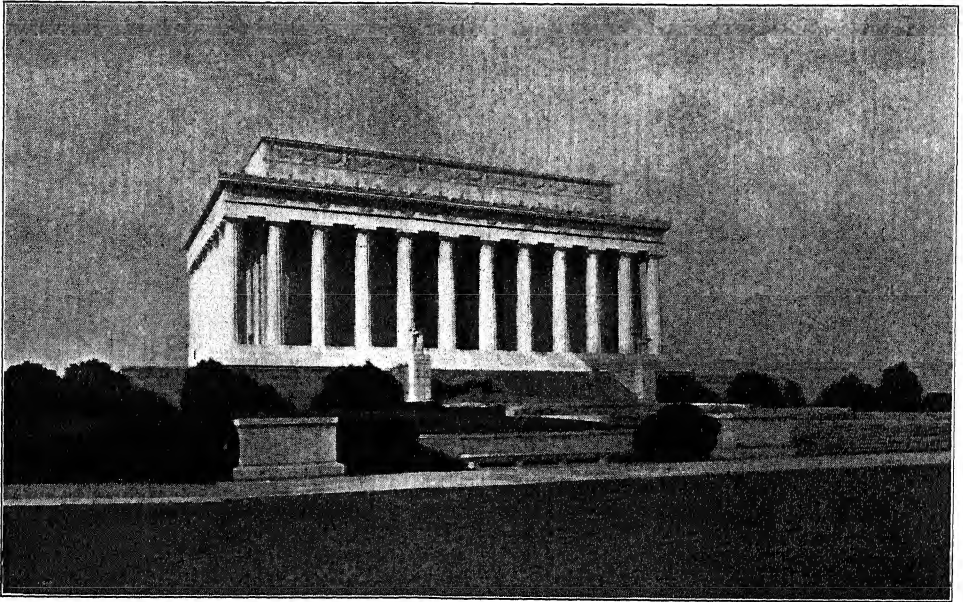
of paint would make. That is more than twenty-one tons, but that's the quantity of paint it takes each time the dome of the Capitol is painted!

One room in the Capitol is called Statuary Hall. That is where each of the forty-eight States is invited to put two statues of famous men from that State. It's not safe to tell a secret in Statuary Hall, for your whisper can be heard 'way across the room if you whisper from a certain spot that's marked by a metal star in the floor. Strange to say, the star was not put there for the whisper, but to show where the desk of John Quincy Adams used to stand when he was a member of Congress after being President.

The whisper is heard across the room because the waves of sound from that spot all seem to be reflected off the walls and ceiling so as to meet at another spot on the other side of the room.

The Capitol is full of interesting things. One of these is a subway or underground railroad. The trains are pulled by electric engines and they run from the Capitol to the Library of Congress and to the Senate Office Building and the House Office Building. These three buildings aren't very far away, but the subway trains save the members of Congress time in getting back and forth.

The more you see of the Capitol, the more seems to be left to see. It has often been called the most stately government building in the world. It is important in architecture for another reason, also. It has been such a good building for a capitol that many of the forty-eight State capitols have been made to look something like it, only smaller. It is a building to be proud of, and it is pleasant to think that the corner-stone was laid by our first President.



Courtesy of The University Prints

THE LINCOLN MEMORIAL, WASHINGTON

There are many other splendid buildings in Washington. One of these is the Lincoln Memorial. The Lincoln Memorial is built in the Greek style and yet differently. It is Greek and yet it is American. That is because it uses the old Greek forms of columns and other details, but uses them in a new way to fit the kind of building it is. You will notice it has no pediment, or triangular space, above the columns as a Greek temple has.

We wait for the train that takes us home from Washington in a huge building called the Union Station. It is so big inside that it makes us feel very small, as the stars do at night when we lie on our backs and look up at them.

New buildings in Washington are now always put up according to Major L'Enfant's plan for the streets and avenues. This makes Washington one of the most magnificent cities in the world. It is almost the only capital city planned as a capital before it was even begun as a city. If you feel like being proud of your capital, go right ahead. It is worth being proud of.

CHAPTER 27

RAINBOWS AND GRAPE-VINES

*“Now who will stand on either hand,
And keep the bridge with me?”*

WHEN I was a boy, my favorite poem was “Horatius at the Bridge.” What a thrill I got whenever my father read aloud the story of the brave Roman and his two companions who held back a whole army while the bridge was being cut down to save the city! I even knew parts of the poem by heart, without trying at all to memorize them.

Horatius at the Bridge; every one knows the story of Horatius. Not so many know the story of the Bridge.

It was the first bridge in Rome, and when “the dauntless three” stood there with flashing swords and mocked the whole invading army, it was the only bridge in Rome. It was a wooden bridge, one that could be cut down with axes, and it was so important to Rome that it was in charge of priests. We are told that when a new bridge was built, after Horatius and the old bridge had saved the city, the priests themselves built it.

Have you ever heard the Pope spoken of as the Supreme Pontiff? Supreme Pontiff is one of his titles. Would you ever guess that this title of the Pope came from the bridge that Horatius defended? The chief priest in ancient Rome was called the Pontifex Maximus, which

in English means the Greatest Bridge Builder. He was called this because he was chief of those in charge of the bridge. So pontifex, or pontiff, came to mean priest, and that is why the Supreme Pontiff or Bridge Builder is one of the Pope's titles.

The *pont* part of *pontiff* turns up in another strange use. Try to imagine what Horatius would have thought if he had suddenly seen a seaplane flying overhead, its propeller roaring, its *pontoons* glistening in the sun. A pontoon is a kind of boat used to hold up a bridge. A bridge across boats is called a pontoon bridge. And so the pontoons that hold a seaplane upon the water got their name because they are like the boats that hold up a pontoon bridge.

And now I'd better tell you what kinds of bridges there are. There aren't as many different kinds as you might think. Really there are only five kinds, and that's a good thing because you can easily learn those five, and then you can name any kind of bridge you see.

Here they are:

Number One is the simple beam bridge. A log across a stream is the simplest kind of a simple beam bridge.

Number Two is the arch. A rainbow would make a beautiful arch bridge, if you could only walk across it. The Chinese have some beautiful arch bridges.

Number Three is the suspension bridge. A wild grape-vine stem that hangs from one tree to another is a good suspension bridge—for a monkey.

Number Four has the hardest name to remember. It is the cantilever bridge (pronounced *canta-leaver*). If you have a board you can make a cantilever bridge. Hold the board by one end so it just reaches across to the table, but don't let it rest on the table. Then the board is a cantilever bridge. A cantilever is a simple beam supported at one end, something like a diving board. Often the bridge has a cantilever coming from both banks of a stream and meeting in the middle.

Number Five is the truss bridge. A truss bridge has its beams

strengthened by a stiff framework of different parts fastened together. The framework may either rise above the roadway of the bridge or be beneath it. The frame of a bicycle is something like a truss. Cantilever bridges are often built with trusses. Most truss bridges are built of wood or iron or steel.

These are the five kinds of bridges. What about pontoon bridges? Pontoon bridges are just simple beam bridges with the beams resting on boats instead of on posts or piers.

The earliest bridges were, naturally, beam bridges. Xerxes of Persia, a great king, built a pontoon bridge across the Hellespont when he came to fight the Greeks in 480 B.C.

Strange to say, the Greeks, who could build a perfect building like the Parthenon, were not bridge builders. They traveled by boat more than by road and so they needed few bridges. Then too, the rivers of Greece are generally small enough to be crossed without a bridge, though the Greeks probably got their feet wet in crossing.

That brings us back to the Romans, the greatest bridge builders until modern times. All roads led to Rome, and the roads had many bridges. Not only in Italy but in Spain and France, in England and in Austria, the fine Roman bridges helped the traveler to get where he wanted to go. Many of the Roman bridges are still standing, are still in use after two thousand years of service. Some were of wood and of course they disappeared long ago, but most of them were built of stones so well fitted together that often no mortar was needed.

The biggest Roman bridges were not meant to carry people, however. They were bridges to carry water. If you had wanted to take a bath in ancient Greece you would have had to carry the water in jars from the stream or well or else use the stream for a bath tub. But in a Roman city many of the houses had running water and there were also public bath houses where you could bathe in beautiful indoor swimming pools full of fresh, clear water. All this water was brought to town by long aqueducts, stone bridges with a trough on top. These

aqueducts went across country for miles from the mountain streams to the city.

When an aqueduct came to a valley it didn't go dipping down into the valley and then up on the other side. It went straight across—as a very high bridge indeed. The Romans couldn't make water pipes very well and so if the aqueducts had gone down hill and then up again, the water would have spilled out at the bottom of the dip. The best-known aqueduct is now the famous ruin called the Pont du Gard over the river Gard near Nîmes in France. There is a picture of it on page 307.

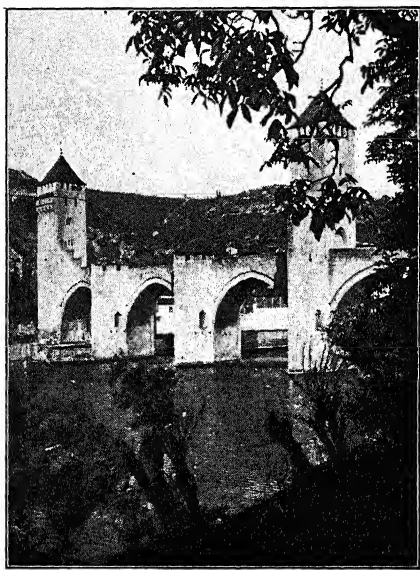
After the fall of the Roman Empire, bridge building had a fall too. For years and years during the Dark Ages very few bridges were built. Then in the twelfth century A.D. a strange thing happened. Bridges throughout Europe went back to the care of priests. Only, the priests this time were Christian priests. They formed a society called the Brothers of the Bridge.

At first the Brothers of the Bridge just kept little inns at river crossings, where travelers might stop. But soon they built their own bridges at these places. Often the Brothers made the roadway over the bridge so narrow at the middle of the bridge that only one horseman could cross at a time. This was to make it hard for robbers and soldiers to dash across and attack travelers. Of course such bridges weren't much good for wagons, but the roads weren't much good for wagons, either. Many of these bridges were strongly fortified with huge stone towers at each end, so that they could stop robber bands or even armies from crossing.

Probably the most famous bridge of the Middle Ages was the old London Bridge over the river Thames. It had houses built on it, some of them four and five stories high, but its foundations weren't very solid and so it was always needing repairs. Parts of it even fell down at various times. You remember "London Bridge is Falling Down"? At that, it lasted, with many repairs, from 1209 to 1831,

when it was torn down to make way for the new London Bridge.

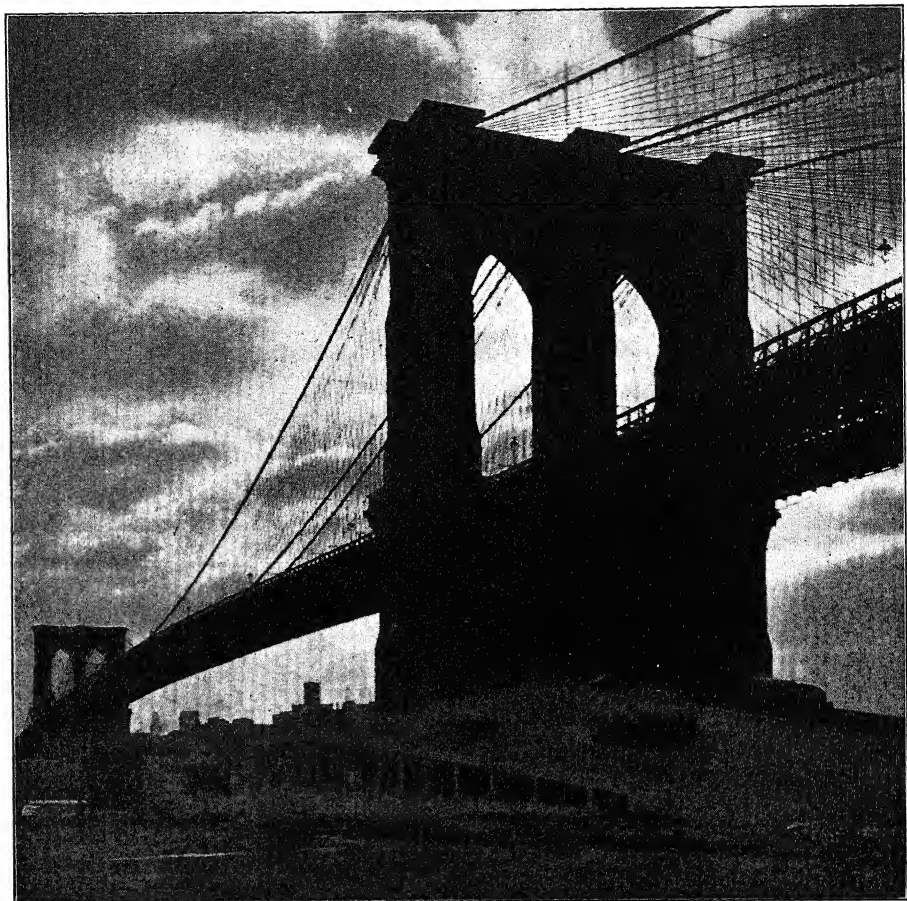
As you know, after the Middle Ages came the Renaissance, when many famous bridges were built. I'd like to tell you about some of them if I had more space—about the most photographed bridge in the world, the Bridge of Sighs in Venice, and about the Ponte Vecchio in Florence, and about the oldest bridge in Paris, which is still called the Pont Neuf or the New Bridge, and about the Pont Royal and the Pont Marie, also in Paris. All these are stone bridges.



Courtesy of Pratt Institute

A MEDIEVAL BRIDGE
CAHORS, FRANCE

Modern bridge building began with the railroads, about 1830. At that time iron bridges were built. Then came steel bridges, and finally concrete and reinforced concrete bridges. Reinforced concrete bridges have iron bars inside the concrete to make them stronger. Many handsome reinforced concrete bridges have been built in recent years. Gen-



Photograph by Ewing Galloway

BROOKLYN BRIDGE OVER THE EAST RIVER, NEW YORK

erally, they are arch bridges—sometimes with one arch and sometimes with many. In the United States they are the favorite road bridges.

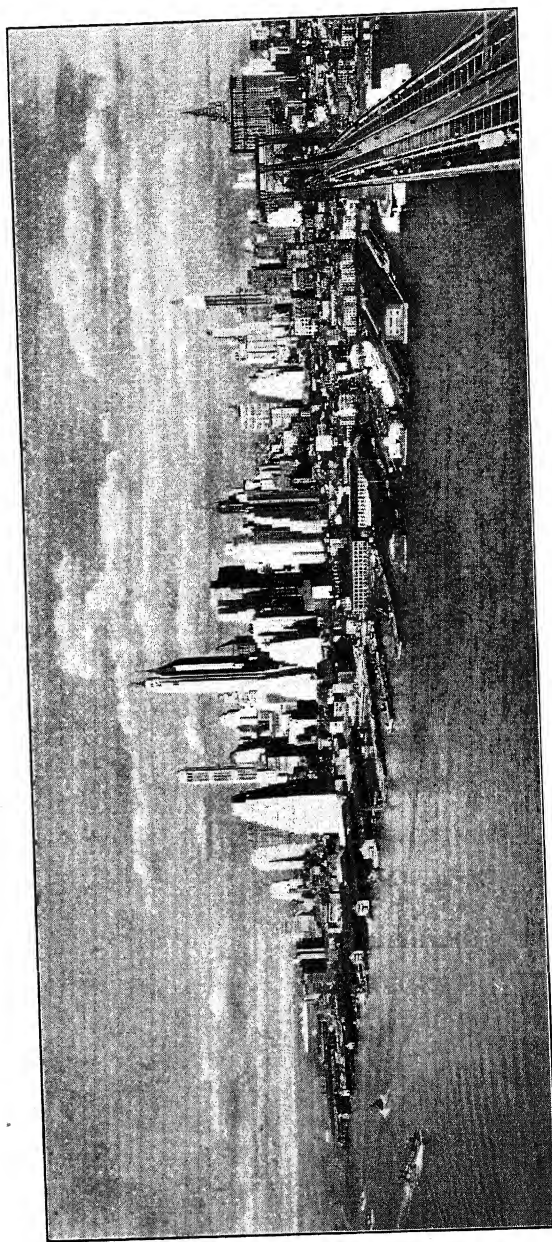
The iron and steel bridges are often truss bridges. In fact, truss bridges are altogether modern.

Some of the earliest bridges in Asia and South America were suspension bridges. These were hung from cables of rope or vine and were pretty shaky. Some of them are still in use. When you cross one you can't help hoping you'll get over alive. Really they are quite strong in spite of being so shaky. But I'd hate to try to cross one on an elephant—or in an automobile.

Modern suspension bridges are hung from steel cables. Most of them are very large and cost millions of dollars to build. One of the most famous is the Brooklyn Bridge over the East River at New York. Bigger ones have been built since, but this grandfather of modern suspension bridges is still considered one of the finest to look at. *It* could carry whole herds of elephants in safety. It does in fact carry herds of street cars and automobiles.

When you go for a trip next time, keep your eyes open for bridges. Many of the finest bridges in the world are right here in the United States. Some travelers play games with bridges as they travel along. In this game a suspension bridge counts 20 points, a cantilever bridge 15 points, an arch bridge 10 points, a truss bridge 5 points, and a simple beam bridge 2 points. Sometimes when you go over a bridge you can't see what kind of bridge it is. All you can see are the railing and the roadway. That would count only one point. Whoever sees the bridge first, gets the points.

Last of all, I'll tell you this. All bridges aren't beautiful, but there are probably fewer ugly bridges than anything else we build; and even ugly bridges generally have an interesting story, if you can find out what it is. One of the ugliest bridges is in Barnstable, England. It has many arches, each one a different size. The size was not planned by an architect, but was determined by the amount of money every citizen donated.



Photograph by Brown Brothers

· SKY-SCRAPERS OF NEW YORK

CHAPTER 28

THE SCRAPERS OF THE SKY

HOW high is "up"? For a mountain, "up" may be several miles. For an airplane, "up" may be even higher than the highest mountain. For a building, "up" is a little over one thousand feet. Not nearly so high as the mountain top, not nearly as high as the airplane can fly, but the one thousand feet "up" of the building seems to me even more wonderful than mountain heights or airplane flights.

Very tall buildings, as you know, are called sky-scrappers. They are an American invention and all but a few of them are in the United States. Most American cities have sky-scrappers but the place where they make the finest showing is New York City. New York has almost two hundred sky-scrappers sticking up into the air like the bristles on a monstrous tooth brush. From a distance they are fairy towers, dream buildings, almost unbelievable. And when you have ridden up to the top of one of the very high sky-scrappers, they become even more unbelievable.

Gothic cathedrals have tall towers and lofty spires, but next to the tall sky-scrappers the Gothic cathedrals would not look high at all. How can men, you wonder, possibly build so far above the ground? But there you are, one hundred and two stories above the ground, and people on the streets below look like moving black specks. You pinch yourself and it hurts, so you must be awake and not dreaming. The building is real, after all. What a long time it must have taken to build it!

You are wrong. It takes a very short time to build a sky-scraper! The Gothic cathedrals, you remember, took hundreds of years to build. The Empire State Building in New York City took less than one year. And yet it has one hundred and two stories. Magic!

Here is more magic. A modern sky-scraper is built from auto trucks! It rises in the air according to schedule. Each steel girder, each piece of stone, each section of pipe, rolls into the building on a truck at just the right time. If the wrong piece got there first, it couldn't be used at once. There would be no place to put it. It would get in the way. Traffic would be blocked on the street. The whole building would have to wait. So the material is taken out of the trucks and hoisted into place at once, instead of being piled up on the ground to wait its turn.

You can easily see, then, that a very important part of building a sky-scraper has to be done beforehand. The plans of the architect and engineer have to be very carefully made and checked. All the material has to be ordered and made ready for use so that it will arrive at just the right time—neither too soon nor too late. And that is one reason why the whole huge, wonderful structure can be put together so quickly and without even blocking the streets around it.

A sky-scraper is made differently from the older kinds of buildings. It has a steel framework. Each story is a kind of steel cage, and on the cage are fastened the outside walls. These walls don't help at all to hold up the building. The steel cages do all the holding up. The walls are like the walls of a tent—to protect the inside from the weather, not to help support the weight. You would be surprised if you found the outside walls of your house were not resting on the ground, but the outside walls of a sky-scraper do not rest on the ground. They hang on the steel cages. Sometimes you can even see a crack between the sidewalk and the walls of a sky-scraper where the walls aren't even touching the ground!

Of course no one would want to walk up to the top floor of a sky-

scraper. It would take too long. If you tried it, you would find you were so tired out when you reached the top that you probably couldn't walk down again. So sky-scrapers wouldn't be any good without elevators. A big sky-scraper has many elevators run by electricity. There are locals and expresses, as on a railroad, so that you can reach the top stories quickly without stopping at each floor all the way up. The elevators on the latest sky-scrapers are arranged so that a passenger never has to wait for one for more than a minute.

The first sky-scrapers were built in the last years of the nineteenth century. These early sky-scrapers were shaped like tall shoe boxes standing on end. After many of these box buildings were built, people found that they cut off the light from the streets below and from buildings next door. And so cities made rules about how sky-scrapers should be built. The rules said that sky-scrapers could no longer be built with a shape like a shoe box. The higher the building rose in the air, the rules said, the narrower it had to be.

The lower part of a sky-scraper, for instance, might cover an entire city block. But after the building had risen a certain number of stories, the other stories above had to be set back from the edge of the streets so as not to cut off the light. The tower of the building might be built as high as the sky, just so its base didn't cover more than one quarter of the base of the first floor of the sky-scraper.

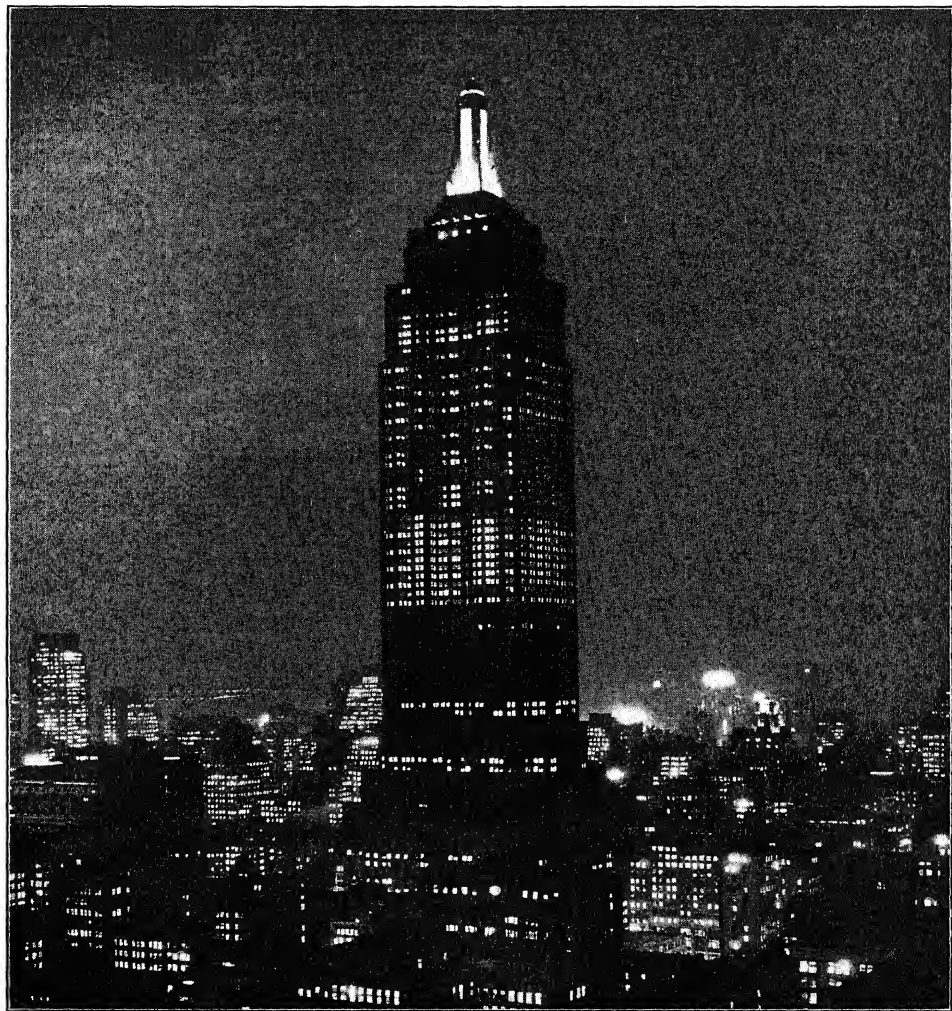
These set-back rules made the new sky-scrapers look quite different from the older ones. The older sky-scrapers looked different, too, because architects had tried to make them in the style of some architecture of the past. Some had Greek columns at the base, although the columns carried no weight and weren't used for anything except show. Some had huge cornices at the top which were copied from the Renaissance buildings, but were just as useless and false as the columns. The outsides of these sky-scrapers were "fake," and "fake" architecture can never be very beautiful.

The new sky-scrappers are not "fake." They are not made to imitate some style of the past. Some people call them "stripped architecture." The architects tried to make their *shapes* beautiful without sticking old-fashioned decorations on the outside. Color began to be used. Several sky-scrappers have the outside walls made of black brick trimmed at the top of the building with gold. The American Radiator Building in New York is black and gold. So is the Richfield Building in San Francisco. Other sky-scrappers have dark red bricks at the lower stories, with the color growing lighter and lighter toward the upper stories. The Chrysler Building and the Empire State Building use the bright nickel-color of rustless steel on the outside.

The hundreds of windows are no longer just holes in the wall. They are used to add to the beauty of the building. In some sky-scrappers the windows look like stripes running from the ground to the top. They seem to carry the eye upward like the lines of a Gothic cathedral. Others have the windows arranged in rows that make stripes across the building instead of up and down. Other sky-scrappers are made like blocks, small blocks on top of larger blocks.

But I haven't yet told you what sky-scrappers are used for. You probably know already. Some are used as offices where people work. Some are used as apartments where people live. Certainly people don't build sky-scrappers for fun. They have to be useful. And as it costs millions of dollars to build a real sky-scraper, the buildings have to make money after they are built. Sky-scrappers make money by having their rooms rented for offices or apartments. In the office sky-scraper, there is often a bank or a store or even a theater on the first floor. Some office buildings have ten thousand people working in them and when all these people start going home between five and six in the afternoon, they jam the sidewalks and fill the streets with traffic.

Sky-scrappers seem wonderful at a distance, they seem wonderful near at hand, and the more one learns about them the more wonderful they seem. If you've never seen a high sky-scraper, it will give you an



Photograph by Publishers Photo Service

THE EMPIRE STATE BUILDING AT NIGHT, NEW YORK

idea of how very high it is when I tell you that the mail chutes have to be made with parts in them to slow up the letters dropping down from the top, for otherwise the letters would go so fast they would be scorched!

CHAPTER 29

NEW IDEAS

HAVE you ever seen a blue house? Blue all over, I mean—blue roof, blue walls, blue chimney. I've never seen a house like that, but I'm sure it would be freaky looking.

Have you ever seen a house all made of steel and glass? Such a house might seem freaky at first, but it would be a different kind of freakiness from the blue house. The blue house could have no good *reason* for being blue; but a steel and glass house might have a very good reason for being made all of steel and glass. After you became used to it, you might like it very much and find it more healthful to live in than an ordinary house. But the blue house—well, I can't see what advantage you would get from a blue house, no matter how used to it you became.

A blue house and a steel and glass house have no ancestors. But most styles in architecture do have ancestors, long lines of ancestors.

Just as

the Roman style developed from the Greek and
the Romanesque style developed from the Roman and
the Gothic style developed from the Romanesque,

so most new styles have grown from past styles in architecture. And most buildings put up nowadays make use of the styles that have been found good or beautiful (or both) in the past.

This modern use of past styles seems quite right as long as the

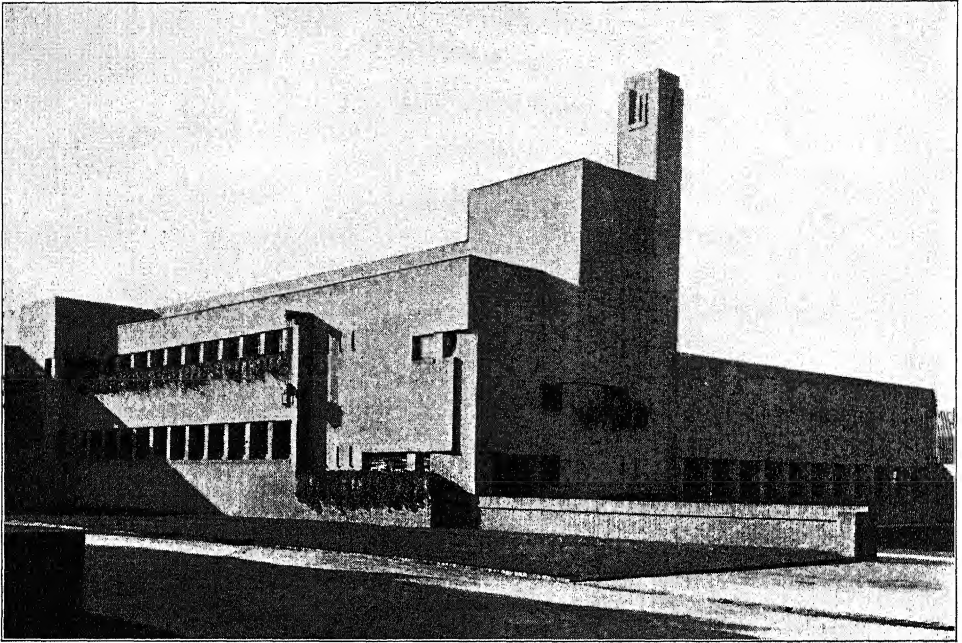
modern buildings have the same uses as the buildings of the past. But many modern buildings have entirely new uses not even imagined by the architects of past styles. And so it seems to some architects that these buildings should be just as free from past styles as the uses of the buildings are. Why design a modern electric power house in Gothic style when there is no connection between a power house and any building built when Gothic architecture was in its glory? Why have Roman columns on a gasoline station when the Romans had never heard of gasoline stations?

Many architects, therefore, find it better to design their buildings in a manner that they think suited to the modern use of the building. They think it better to have the style of the building show the purpose of the building than to have its use concealed in the forms of the past. This very modern style of architecture is sometimes called *functional* because it shows the use or function of the building.

You can see what I mean very well in the history of sky-scrapers. The early sky-scrapers generally had huge Renaissance cornices. Often they had Greek or Roman columns at the main entrance. Later it was thought that the Gothic style was most suitable for sky-scrapers, as in the Woolworth Building in New York City, because of the vertical emphasis in both sky-scraper and Gothic cathedral. But more recent sky-scrapers are designed to look like what they are, steel skeletons covered with a protecting material.

Even dwellings have been designed to match their present purpose instead of using styles of the past. An American architect named Frank Lloyd Wright was one of the first to design houses in a functional style. He was at first more appreciated in foreign countries than in the United States. One of his best-known buildings is the earthquake-proof Imperial Hotel in Tokio, Japan, which doesn't resemble any other building you have ever seen.

In Europe there has grown up a style of architecture that, like the



Courtesy of The University Prints

A SCHOOL AT HILVERSUM, HOLLAND

house of glass and steel, has no ancestors. In Holland and Germany this functional style has been very much used for dwellings. They are constructed of steel and glass, brick and concrete, and they seem to use these materials better than any past style could. For instance, they generally have flat roofs instead of sloping roofs, because the use of steel has made the roofs strong enough to stand any weight of snow that might fall upon them. These flat roofs are very convenient for sun porches.

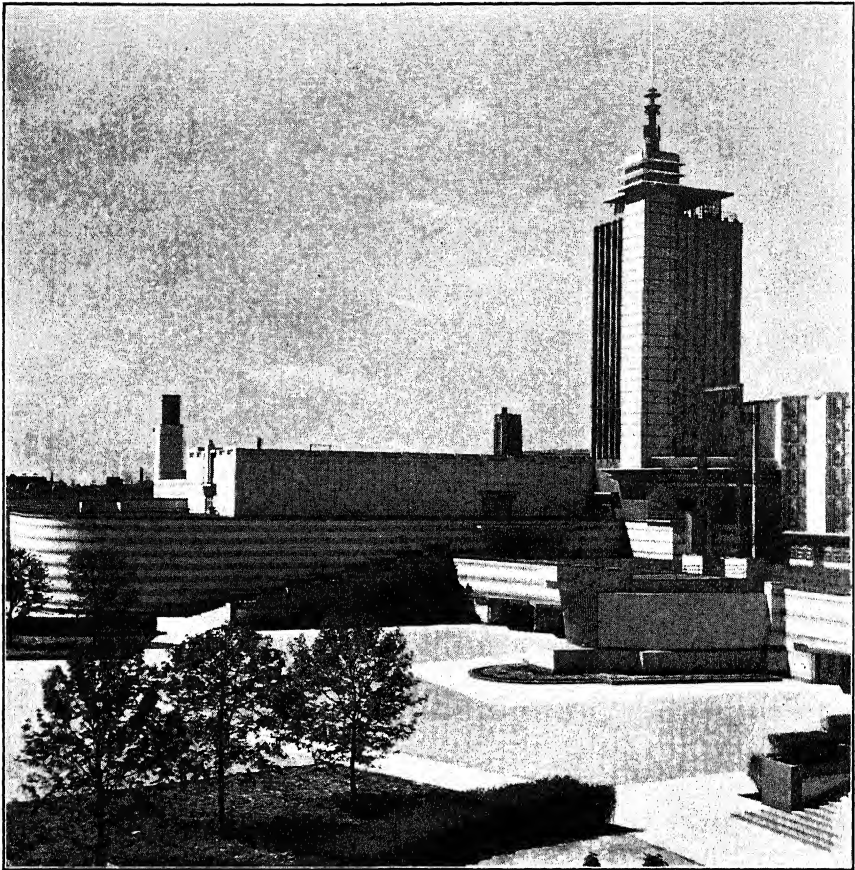
You might think these very modern houses in Holland would spoil the looks of the quaint old Dutch brick houses with their high, steep roofs. But the new-style houses are generally built in groups. One little functional house in a whole street of old Dutch houses would

look out of place. But when all the new houses are grouped together the effect is pleasant. They look tidy and shipshape with their smooth concrete and glass sides.

In America, dwellings have not generally been built in this style as much as in Europe. The United States has, however, been building more and more factories and warehouses and stores and office buildings in functional styles, and you can see examples in most of our big cities. They are worth keeping your eyes open for, I can tell you, because, as you grow up, such buildings will probably become more and more important. We now have factories that are air-conditioned so that the windows are never opened and yet the air inside is always the right temperature and much cleaner than the air outside. The United States and Germany are leading the way in these modern functional factories.

Of course you won't find much decoration on a functional factory. Such a building has smooth clean-cut lines and a good shape to make it attractive. The later sky-scrapers are the buildings to look at for modern decoration. So also are many of the new public buildings such as libraries and railroad stations. The State Capitol of Nebraska, planned by the famous American architect Bertram Goodhue, is one of the best-liked new-style buildings. It is entirely unlike buildings of the past and yet no one could call it freakish. In fact, it is almost universally admired.

The buildings of the Chicago Century of Progress Exposition of 1933 are other examples of buildings without ancestors. They look so different from other buildings that you may not like them at first. But though none of these buildings have ancestors, you must remember that they probably will be ancestors themselves some day. Think how interesting it's going to be for you to grow up with these new kinds of buildings. Perhaps when you are old enough to be a grandfather, or a grandmother (can you imagine it!) you will say to your grandchildren:



Photograph by International News Photos, Inc.

THE BELL TOWER SURMOUNTING THE HALL OF SCIENCE AT A
CENTURY OF PROGRESS EXPOSITION, CHICAGO

“Yes, children, I remember when our style of architecture was just getting a good start. Way back in 1933 there was the Chicago Exposition and every one thought the buildings were awfully peculiar. And now see how old-fashioned they look.”

And your grandchildren will probably say, "Goodness! how old you must be, Grandpa [or Grandma]!"

Another new idea in architecture is to build houses the way automobiles are built, in a factory. They could be of steel and glass and turned out by the hundreds, all ready to be fastened together and set up to live in. Then houses could be bought for much less money than it takes to-day to buy a house, and probably the houses would be very convenient ones to live in. Perhaps at first they would not be really pretty houses, but that could be remedied as the factories learned to make them better. Perhaps when you have those grandchildren, you will be living in a factory-made house, which you could turn in, every year or so, for a new one, like an automobile. I hope they won't be painted blue.

Another new idea in architecture is the building of comfortable, clean, healthful houses to take the place of the terrible tenements in the slums that all cities have. They will have to be well and carefully planned and must have play-grounds and gardens and open spaces and sunlight. And of course they must be cheap enough to rent so that poor people can live in them. In most European countries the governments have helped to build such houses for workmen and their families. Often they are arranged in what are called garden cities.

These garden cities are very thoughtfully laid out, so that many families can live in them without being crowded. Each little garden city is complete. It has its own stores and schools and churches. Generally the garden cities are on the outskirts of the big cities.

We have begun to get rid of slums in the United States, but there is still a great deal to do. This is another idea in architecture that you can watch grow as you grow. Some day you yourself perhaps will be helping to get rid of the tenements in the slums and will be building good houses to take the place of bad ones.

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